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AD849172

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RDT&E PROJECT NO.

(6) USATECOM-PROJECT NO. 7-8-0961-01

INITIAL PRODUCTION TEST OF PUMP, CENTRIFUGAL, 600-GPM .

FINAL LETTER REPORT.

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U S ARMY
GENERAL EQUIPMENT TEST ACTIVITY
FORT LEE, VIRGINIA

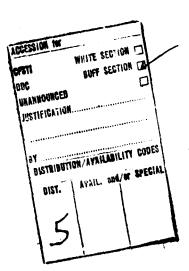
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DEPARTMENT OF THE ARMY HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND ABERDEEN PROVING GROUND, MARYLAND 21005

AMSTE-GE

1 4 MAR 1969

SUBJECT: Final Report of Initial Production Test of Pump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

Commanding General
U. S. Army Mobility Equipment Command
ATTN: AMSME-QRT
4300 Goodfellow Boulevard
St. Louis, Missouri 63120

1. Reference letter, STEGE-SS-T, USAGETA, 16 October 1968, subject: "Interim Letter Report, Initial Production (Specification Requirements)
Test of Pump, Centrifugal, 600-GPM, GED, 4-Inch, WheelMounted, USATECOM Project No. 7-8-0961-01."

2. Subject report is furnished for information and necessary action. (Incl 1)

3. The test item is a centrifugal, single-stage, integral self-priming water pump. The item is wheel-mounted, provided with a military standard gasoline engine, and has a rated capacity of 600 GPM. The initial production test was conducted by U. S. Army General Equipment Test Activity at Fort Lee, Va., and Fort Story, Va., during the period 21 August 1968 through 20 January 1969. The results of the tests to determine conformance to the initial production requirements of the specification were reported by referenced letter report. Inclosure 1 reports the results of all tests conducted by USATECOM on the 600-GPM pump.

4. Results of the initial production test are as follows:

a. The item failed to meet applicable tests of the specification in the following respects.

f 3

AMSTE-GE 14 MAR 1989

SUBJECT: Final Report of Initial Production Test of Pum, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

- (1) Change 1 to the TM 5-2805-204-14 which is applicable to the Model 4-A084-III standard military engine of the test item was not furnished with the equipment. It is essential that the engine technical manual incorporating Change 1 be issued with the equipment. No evaluation of the manual is required since this is a standard technical manual.
- (2) During the fuel tank pressure test with an internal tank pressure of not less than 5 psi and the top of the tank immersed 12 inches below the surface of the water, no evidence of leakage from the tank was noted. However, minimal fuel vapor leakage from the engine fuel tank vent valve was noted. No corrective action is required since the military specification was met in that the fuel tank did not leak during the test under the test conditions as outlined in the military specification.
- (3) Two electrical tachometer failures occurred during the test. The tachometer on test item H-2283 was found to be inoperative when the test was initiated. The tachometer on test item H-2283 failed after 230 hours of test operation. The use of a mechanical rather than electrical tachometer should be investigated. This problem is classified as a shortcoming, as outlined in Appendix I of subject report.
- b. One deficiency was reported during the operational test. The maintenance instructions for wiring are not compatible with the actual wiring of the control panel. The condition has been downgraded by this headquarters to a shortcoming, since the wiring harness is not complex and is color coded. These factors minimize the chance of maintenance error in trouble shooting by qualified personnel, even though some difficulty may be encountered. However, it is highly desirable that the wiring diagram discrepancy be corrected to improve maintainability of the item.
- c. Ten other shortcomings were reported in Appendix I, subject report. Considering the deficiency regraded as a shortcoming as stated in paragraph 4b above, there are a total of eleven shortcomings remaining.
- d. The test item demonstrated a reliability of 90 per cent at a confidence level of .90 (Appendix III-B of subject report).

AMSTE-GE

SUBJECT: Final Report of Initial Production Test of Pump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

5. The pump was adequately maintainable. Exceptions were the discrepancy in the wiring diagram, paragraph 4b above, and the lack of maintenance instructions, as relate to flushing and inspection of the intermediate housing when abrasive liquids are pumped.

6. It is concluded that:

The pump, centrifugal, 600-GPM is suitable for issue;

The item is adequately maintainable and reliable.

7. It is recommended that:

- a. As many as possible of the shortcomings be corrected.
- b. The maintenance and overhaul manual incorporate suggested changes, as indicated in Appendix IV of subject report.
- c. Change 1 to TM 5-2805-204-14, which is applicable to the Model 4-A084-III standard military engine, be issued with the subject item.

FOR THE COMMANDER:

1 Incl Final Rept (1 cy) WILLIAM H. HUBBARD

Colonel, GS

Deputy Chief of Staff



DEPARTMENT OF THE ARMY U.S. ARMY GENERAL EQUIPMENT TEST ACTIVITY FORT LEE, VIRGINIA 23801

STEGE-TE-S

14 February 1969

SUBJECT: Final Letter Report of Initial Production Test of Fump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

Commanding General
U.S. Army Test and Evaluation Command
ATTN: AMSTE-GE
Aberdeen Proving Ground, Maryland 21005

1. References are as follows:

- a. STE Form 1028, AMSTE-GE, U.S. Army Test and Evaluation Command, 29 January 1968, subject: "Test Directive for Initial Production Test of Pump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01."
- b. Letter, AMSTE-GE, USATECOM, 4 December 1967, subject: "Planning Directive for Initial Production Test of Pump, Centrifugal, 600-GPM-USATECOM Project No. 7-8-0961-01."
- c. Military Specification MIL-P-52474 (MO), 3 August 1966, subject: "Pump, Centrifugal, Water, Gasoline-Engine-Driven, 4-inch, 600-GPM at 50-Feet Total Head."
- d. Test Plan, U.S. Army General Equipment Test Activity, dated March 1968, subject: "IPT of Pump, Centrifugal, 600-GPM, Water, GED, 4-Inch, Wheel-Mounted, USATECOM Project No. 7-8-0961-01," with Change 1, dated 12 November 1968.
- e. MIL-STD-209B, "Slinging Eyes and Attachments for Lifting and Tying Down Heavy Military Equipment," unclassified, 11 May 1960; Notice 1, 12 June 1963.

SUBJECT: Final Letter Report of Initial Production Test of Pump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

- f. Letter, STEGE-ET-L, this headquarters, 15 October 1968, subject: "Interim Letter Report, Initial Production (Specification Requirements)
 Test of Pump, Centrifugal, 600-GPM, Water, GED, 4-Inch, Wheel-Mounted,
 USATECOM Project No. 7-8-0961-01."
- 2. IP test of the 600-GPM Water Pump was conducted at Fort Lee and Fort Story, Virginia, during the period 21 August 1968 through 20 January 1969. Plan of test (Ref. d) as changed was followed with no deviations. A total of 750 operational hours were compiled on two test items, 188 of which were accomplished during salt water applications.
- 3. The test item is considered adequate to meet the specification requirements of Specification MIL-P-52474 (MO) (Ref. c) except as follows:
- a. The engine manual furnished with the pumping unit, TM 5-2805-204-14, is not applicable to the Model 4-A084-III standard military engine.
- b. The engine fuel tank cap is not suitable to prevent leakage through the vent when the latter is in the closed position (Par. 5e(2), Ref. f).
- c. The inoperative tachometer (EPR's No. L7-1, L7-3, and SPECIAL, App. IV) is considered to be directly related to poor quality control inspection procedures at the contractor's plant. See Reference f for detailed findings.
- 4. The pump performed mission tasks to an acceptable degree. Safe use and handling characteristics were confirmed, and human factors aspects were adequate.
- 5. The test item was transported by truck over highways and cross-country and by railcar without difficulty; however, the tiedown eyes do not conform to MIL-STD-209B (Ref. e). The tiedown eyes suffered weld fractures and severe bending during the rail impact test. (App. II).
- 6. The test item met reliability requirements (App. III-A and B) as specified in the test plan (Ref. d). Maintainability of the test item (App. I and III C, D, and E) is not considered adequate until incorrect wiring instructions in the operation maintenance and overhaul manual are corrected (deficiency, EPR L7-14, App. IV). The malfunction of the pump seal

STEGE-TE-S

14 February 1969

SUBJECT: Final Letter Report of Initial Production Test of Pump, Centrifugal, 600-GPM, USATECOM Project No. 7-8-0961-01

(EPR L7-11, App. IV) is attributed to pumping abrasive liquids. Additional preventive maintenance instructions requiring flushing and inspection of intermediate housing when pumping abrasive liquids will prolong seal life and enable early detection of seal wearout. Liquids to be pure ped should be filtered or settled to the maximum practical extent to prevent abrasion of pump impellers, shafts, and seals (EPR L7-15, App. IV).

HOWARD W. HEMBREE, Ph.D.

Technical Director

C. R. CHURCI Colonel, QMC Commanding

4 Incl

Appendix I - Deficiencies and Shortcomings

Appendix II - Transportability

Appendix III - Maintenance Evaluation

Appendix IV - EPR's

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APPENDIX I. DEFICIENCIES AND SHORTCOMINGS

1. DEFICIENCIES

Remarks EPR L7-14.		RPR L7-1 EPR L7-3	EPR L7-2.	EPR L7-4.	EPR L7-5. The furnished rings had their openings closed only with friction tape, which deteriorated with time and use.
Suggested Corrective Action Assemble the control panel wiring in accordance with the maintenance instructions or change the main- tenance instructions to correspond to the test item.	2. SHORT COMINGS	Suggested Corrective Action Convert to mechanical tachometers.	Redesign of the breather assembly to permit removal with a socket wrench on top.	Remove electrical type choke and use the hand choke only; or change to a thermostatic type choke commonly used in automobiles.	Use a standard split key ring ir place of the ring furnished with the test item.
Deficiency 1.1 Maintenance instructions for wiring the control panel are inaccurate.		Shortcoming 2.1 Malfunction of two tacho-meters.	assembly is not accessible for removal with tools found in the general mechanics tool set (FSN 5180-754-0641) when the engine is hot.	2.3 Malunction of choke solenoid #13206-E0809.	2.4 Loss of anchor lock pin.

APPENDIX I

Suggested Corrective Action car hump test, Increase diameter of the 1/2" bar ent and 5 of tiedown eyes and weld bars to frame ; the eyes to on both sides of frame channel ured. flange.	mit the wire meter sending without engine cover	of mag- nufacture	salt ihould :r	enanc hing ate
ng car hump test, ent and 5 of the eyes to ured.	engine shroud to permit the wire leading to the tachometer sending unit to pass through without being pinched by the engine cover.	Improve quality control of magneto assembly by the manufacturer.	Additional protection for salt water pumping operations should be provided for the starter motor.	Additional preventive maintenance instructions requiring flushing and inspection of intermediate
2.5 During the rail car hump test, the 4 tiedown eyes bent and 5 of the 8 welds securing the eyes to the pump frame fractured.	the electrical system was caused by the tachometer wire being pinched between the top cover and lower shroud of the engine.	2.7 Malfunction of the magneto serial #5805606; center carbon worn out, contact point set plate (82796 22437H) loose.	2.8 Malfunction of the engine starter motor.	2.9 Premature wearout of the pump seal (A004-H36).

because of additional analysis. sified from shortcoming Failure of pump seal caused damage to following items: 1. A010-M36 gasket. 2. A907-M36 shim set.

housing when pumping abrasive liquids will prolong seal life

and enable early detection of seal wearout.

3. A009-H36 plate seal 4. A003-H36 sleeve shaft. 5. A100-H36 inter. assembly.

APPENDIX I

Renarks	6. FSN 2920-882-3401motor starter.7. 97403-13213E3286solenoid startermotor.	EPR L7-13.
Suggested Corrective Action		Use the same material in the plug and casing.
Shortcoming		2.10 Prior to operation, the priming plug A-909-M36 was

2.10 Prior to operation, the priming plug A-909-M36 was broken during removal to prime the pump. The entire wrench area of the plug twisted off, leaving an opening into the pump housing.

I-3

APPENDIX II. TRANSPORTABILITY

1. Highway

- a. The pump, packaged in a wooden crate, was shipped by commercial truck to Fort Lee, Virginia, a distance of 690 miles, with no damage resulting.
- b. At Fort Lee, the uncrated, wheel-mounted pump was located onto a truck, cargo, 2 1/2-ton, 6x6, M35, for highway testing (Fig. 1). A standard commercial 2-ton forklift was used for the loading. The test item was also lifted with a 5-ton wrecker, M62, in order to test the lifting eye. The truck-mounted pump was then blocked and tied down as shown in Figure 2. No difficulty was encountered in loading the pump unit aboard the M35 truck by three men and a forklift in 10 minutes. The item was blocked and tied down in the truck bed without difficulty.
- c. The test item was transported 114 miles on concrete and blacktop highways between test sites at Fort Lee and Camp Pickett, Virginia, and was subjected to emergency stopping tests at 10, 20, 30 and 45 mph with no damage occurring. During the stopping test, impact registers were mounted on the pump frame and on the truck bed to measure the stopping forces in the longitudinal, transverse, and vertical directions. Stopping distances were obtained by using a gun-type detonator marking device wired to the stoplight circuit of the truck and then measuring the distance with a steel tape. The directions and magnitudes of the stopping forces are recorded in Table I.

2. Cross-Country

The pump unit, mounted on the truck, cargo, 2 1/2-ton, 6x6, M35 and secured as described for the highway test, was transported 153 miles cross-country over rough terrain at Camp Pickett, Virginia, at an average speed of 10 mph without difficulty.

3. Rail

a. At Fort Lee, Virginia, the test item was towed onto a concrete loading ramp and then loaded onto a USAX 50-ton capacity, military standard domestic service flatcar equipped with AAR couplers at both ends. A 1 1/4-inch-wide 16-gage steel band was run through the trailer tongue eye and attached at each end by a 2x4x1/8-inch plate nailed to car deck with 8 3/16-inch diameter by 1 3/4-inch-long screw nails (Fig. 3). The test item was loaded and centered on the flatcar by two men in 15 minutes. Five men required 1 hour 30 minutes to chock and tie down the unit.



Figure 1. 600-GPM pump, trailer-mounted, loaded on truck for highway and cross-country testing.

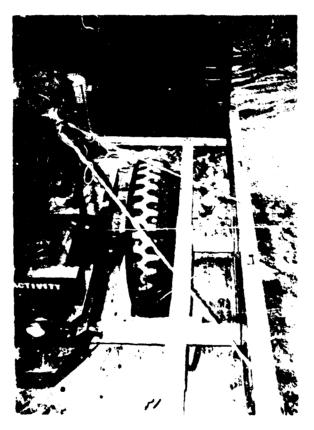


Figure 2. Fun plunit blocked and field down in true (5) d.

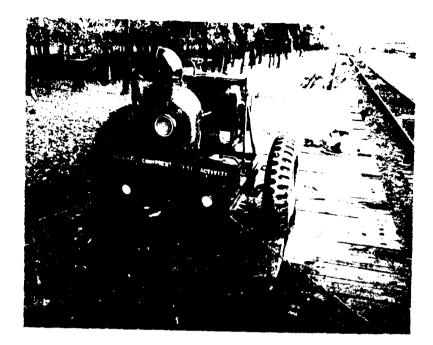
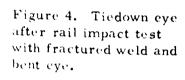


Figure 3. Pump unit chocked and tied down for rail impact test.





APPENDIX II

- b. Rail impact tests were conducted in accordance with AAR recommendations. Six empty flatcars having a total weight of 305,000 pounds were coupled together with the brakes set. Accelerometers were installed on the frame of the pump unit and on the deck of the test flatcar. Impacts were made at 4.18, 6.31, and 8.54 mph in the forward direction and 8.02 mph in the reverse direction. During the pact testing, the four tiedown eyes became permanently bent (Fig. 4) and imum deflection at the bottom of the "U"-shaped eyes was 1 1/2 inche. Pive of the eight welds, attaching the eyes to the pump frame, were fractured. Bending of the eyes caused the wires to become loose. The chocking and bracing did not suffer any damage. The direction and magnitude of impact forces and location of accelerometers are shown in Table II.
- c. The test item, mounted on the flatcar with a deck height of 43 1/2 inches from the top of rail, without difficulty passed through the clearance device consisting of clearance diagrams of the AAR Standard, the International Universal Gage, and the Foreign Service Military Standard.
- 4. Lifting and Tiedown Attachments. The lifting and tiedown attachments did not meet the requirements of MIL-STD-209B (Table III).

TABLE I

EMERGENCY STOPPING TEST DATA

PUMP UNIT MOUNTED ON TRUCK, CARGO, 2 1/2 TON, 6x6, M35

(Max	"G" For	ce Read	ings		Stopping
			on In	npact Re	gister T	apes		Distance
Run	Speed	Mount	ted on	Truck	Mount	ed on	Pump	(Fcet)
No.	(MPH)	Vert	Lat	Long	Vert	Lat	Long	
1	10	0.2	0.6	0.8	0.2	0.6	0.8	8.6
! 2	10	0.2	0.6	0.8	0.2	0.6	0.8	9.6
3	10	0.4	0.6	0.8	0.2	0.6	0.8	9.8
4	20	0.2	0.6	0.6	0.2	0.6	0.8	22.7
5	20	0.2	0.6	0.6	0.2	0.6	0.8	24.8
ь	20	0.4	0.6	0.8	0.6	0.6	0.8	24.8
7	30	0.2	0.6	0.8	0.2	0.6	0.8	55.3
8	30	0.6	0.6	0.6	0.6	0.8	0.8	51.3
	. 30	0.2	0.6	0.6	0.2	0.6	0.8	45.8
10	4.3	0.2	0.6	0.8	0.4	0.6	0.8	95.4
11	45	0.2	0.6	0.6	0.4	0.6	0.8	108.3
12	45	0.2	0.6	0.6	0.4	0,6	0.8	107.5

APPENDIX II TABLE II

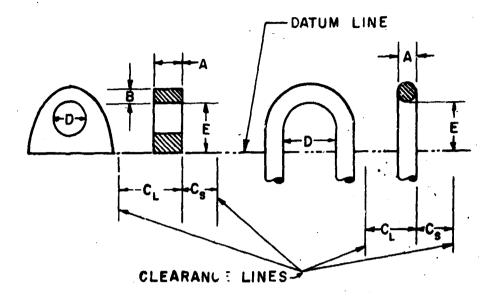
SUMMARY OF MAXIMUM "G" FORCES FOR IMPACT TEST ON FLATCAR

		Actual			ter Mou	nting	Locatio	n	Buffer Car
Run	Direction	Car Speed		Flatca	r	Pu	mp Fre	ne	Movement
No.	of Hump	(MPH)	Vert	Lat	Long	Vert	Lat	Long	(Inches)
1	Fwd	4.18	2.1	0,7	4.1	3.4	1.0	3.6	3
2.	Fwd	6.31	3.6	1.1	6.4	2.7	1.9	3.7	7
3	Fwd	8.54	6.6	1.9	12.4	2.7	1.1	6.4	13
4	Reverse	8.02	7.4	2.0	15.9	3.9	1.4	5.4	6

APPENDIX II

TABLE III

COMPARISON OF DIMENSIONS OF LIFTING AND TIEDOWN EYES (Dimensions are in inches)



	Weight				Rest	ricting	Point	s			
	Range (Long Ton 2240 lbs)	Max	A Min	Max	B Min	C _L a Min	C _S a Min	Max	D Min	Max	E Min
MIL-STD-209B Type III Class I	1-10	1	3/4	1	3/4	7	3	3½	3	5	3
Lifting Eye (Only one provided)	1	12				No Rest	8놫	:	3	3	5/8
Tiedown Eyes (4 provided)	1	1 2				No Rest	16	1	21/2	1	5/8

 $^{^{\}rm a}{\rm There}$ shall be no interference with ${\rm C}_{L}$ and ${\rm C}_{S}$ which could interfere with engaging a shackle and pin in the eyes.

APPENDIX III. MAINTENANCE EVALUATION

APPENDIX III-A

MAINTAINABILITY, RELIABILITY, AND AVAILABILITY SYMBOLS

The symbols listed below will be used as variables in the computations in Appendix III-B.

 $R_L(x; 1-c)$ = The lower confidence limit on reliability

 $\chi^2_{1-Q'}$ 2r/2 = Chi-square value for a confidence level of 100 (1-42)

% and 2r/2 degrees of freedom

x = Mission time

1-42 = Confidence coefficient

MTBF = Mean time between failures

MDT = Mean downtime

MTTR = Mean time to repair (failures)

Mean active maintenance downtime

MTBM = Mean time between maintenance

MR = Maintenance ratio

A_i = Inherent Availability

Aa = Achieved Availability

A_o = Operational Availability

b = Operating Time (hours, miles, etc.)

c = Active maintenance man-hours (scheduled and unscheduled)

d = Active maintenance clock hours (scheduled and unscheduled)

f = Unscheduled active maintenance clock hours

g = Downtime in hours (include active and inactive maintenance time for both scheduled and unscheduled maintenance actions)

r = Number of failures

Number of maintenance layovers (include both scheduled and unscheduled maintenance actions)

Active maintenance man-hours to correct failures.

q = Active maintenance clock hours to correct failures.

III-A

APPENDIX III-B MAINTAINABILITY, RELIABILITY, AND AVAILABILITY COMPUTATIONS

	#	2282	#2283	Sample
Mission Time (x)	=	20	20	20
Confidence Level (1-X)	=	. 90	. 90	. 90
No. of Failures (r)	=	0	1	1
Operating Time (b)	=	150.0	600.0	75 0.0
Maintenance Man-hours (c)	3	1.7	35.8	37.5
Maintenance Clock hours (d)	=	1. ?	32, 2	33. 9
Unscheduled Maintenance clock hours (f)	=	0.3	13.0	13.3
Downtime (g)	=	1.7	51.8	53. 5
No. of Maintenance Layovers (s) =	3	15	18
Maintenance Man-hours (p)	=	0.0	4.0	4.0
Maintenance Clock hours (q)	=	0,0	4.0	4.0
COMPUTATIONS:				
MDT = (g/s)	=	0,6	3.5	3.0
MTBF = (b/r)	=	**	600.0	7 50.0
$\overline{M} = (d/s)$	=	0.6	2.1	1.9
MTTR $(man-hours) = (p/r)$	=	*	4.0	4.0
MTTR (clock hours) = (q/r)	=	**	4.0	4.0
MTBM = (b/s)	=	50.0	40.0	41.7
MR = (c/b)	æ	0.011	0.060	0.050
A _i = (MTBF/(MTBF/MTTR (clock hours)))	=	1.000	. 993	. 995
$A_a = (MTBM/(MTBM/\overline{M}))$	=	. 988	. 950	. 956
A _o = (MTBM/(MTBM/MDT))			920	. 933
RELIABILITY; $R_L(x, 1-\cancel{K}) = e$	хр	$\left(-\frac{x}{x}\right)^{2}$	$\frac{-(\chi', 2r/2)}{2} = .6$	90
* Indeterminable due to division			/	

APPENDIX III-C

Scheduled and Unshceduled Maintenance

	REMARKS		01	50-hour service EPR L7-2	50-hour service	50-hour service	50-hour service	Deferred to 250 hours Scd Maint EPR L7-3	Deferred to 250 hours Scd Maint EPR L7-4	Quarterly 250-hour Maintenance	Lock pin lost EPR L7-5	50-hour service
, 	REASON PERFORMED		Ø	Scd	Scd	Scd	Scd	Unscd	[hscd	Scd	Unscd	Scd
and Unsuceduled Maintenance	LIFE H-HOURS		8	20	100	150	200	200	225	250	250	300
nceduled	ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS	7	0.5	0. 4	0.3	0.3	2.3	1.5	6.7	0.2	0.5
and ons	ACTIVE MAINTENA TIME	CLOCK HOURS		0.5	4.0	0.3	0.3	2,3	1.5	6.7	0.2	0.5
Scheduled	TM	INADE- QUATE	9					×	×			
Scr	TM	ıΨ	S	×	×	×	×			×	×	×
	-OPER/CREW -ORGZN -DIRECT -GENERAL	RECOM- MENDED	•	υ	υ	ပ	ပ	0	0	0	0	U
200	C-OPER/CR O-ORGZN F-DIRECT H-GENERAL	PRE- RECOM-	Ð	O	υ	υ	υ	•	0	0	0	O
	GROUP COMPONENT NO. AND RELATED	OPERATIONS	2	Service Engine (Change oil)	Service Engine	Service Engine	Service Engine	Tachometer Replace	Choke Assy Automatic	Quarterly Service	Lock Pin	Service Engine (Change oil)
	GROUP NO.		-	0100	0100	0100	0010 (-C-1	2090	0312	0100	1501	0100

C			MAINT	LEVEL								
CANADE ANDE CLOCK MAN <	GROUP COMPONENT NO. AND RELATED	-		≥	T.I	CTIONS	ACT! MAINTE TIR	VE NANCE E	LIFE H-HOURS	REASON PERFORMED	REMARKS	
3 4 5 6 7 8 9 9 0 F X 4.0 4.0 316 Unscd Unscd 1.0 350 Unscd 1.0 1.0 350 Unscd 1.0 1.	OPERATIONS		PRE- SCR:BED	PECOM-	ADE -	NADE- OUATE	CLOCK	MAN- HOURS				
0 F X 4.0 4.0 316 Unsed 0 0 X 1.0 1.0 350 Unsed C C X 0.5 0.5 350 Scd C X 0.5 0.5 400 Scd C X 0.5 0.5 450 Scd O X X 0.5 450 Scd F F X 1.6 3.2 450 Scd O X X 1.6 3.2 450 Nacd F F X 1.6 3.2 10.3	~		90	4	ທ	9	7		8	6	01	
0 X 1.0 1.0 350 Unsed C C X 0.5 0.5 350 Scd C C X 0.5 0.5 400 Scd C C X 0.5 0.5 450 Scd O X X 0.1 500 Unscd F F X 1.6 3.2 512 Unscd C X X 2.0 4.0 550 Scd C X X 0.5 550 Scd	Magneto		0	[24]	×		4.0	4.0	316	Unscd	L7-8,	
C C X 0.5 0.5 350 Scd C C X 0.5 0.5 400 Scd O C X 0.5 0.5 450 Scd O X X 1.6 3.2 500 Unscd F F X 1.6 3.2 512 Unscd O X X 2.0 4.0 512 Unscd C X X 2.0 4.0 550 Scd C X X 2.0 4.0 550 Scd C X X 2.0 4.0 550 Scd C X X 0.5 2	Motor	•	0	0	×		1.0	1.0	350	Unscd	L7-9	
C X 0.5 0.5 400 Scd C X X 0.5 450 Scd 0 X X X X X X F F X 1.6 3.2 512 Unscd 0 X X 1.6 3.2 512 Unscd C X X 2.0 4.0 550 Scd	Service Engine		U	ပ	×		0.5	0.5	350	Sed		
C X 0.5 0.5 450 Scd 0 X X X X X X X Y	Service Engine	1)	υ	v	×		0.5	0.5	700	Scd		
0 X 0.1 0.1 500 Unscd F F X 1.6 3.2 512 Unscd 0 0 X 0.3 0.3 512 Unscd C X X 2.0 4.0 512 Unscd C X X 2.0 4.0 512 Unscd C X X 0.5 550 Scd C X 0.5 550 Scd	Service Engine		υ	v	×		5.0	0.5	450	Scd	50-hour service	
P F K 0.1 0.1 500 Unsed P F X 1.6 3.2 512 Unsed O X 0.3 0.3 512 Unsed C F X 2.0 4.0 512 Unsed C X X 2.0 4.0 512 Unsed C X 0.5 7.0 550 Scd C X 0.5 7.0 600 Scd	Service Eng & P	Pump	0	0	×				200	Scd	250-hour QM service	
F F X 1.6 3.2 512 Unscd 0 0 X 0.3 512 Unscd C .F X 2.0 4.0 512 Unscd C X 0.5 4.0 512 Unscd C X 0.5 550 Scd C X 0.5 550 Scd	Auto C	hoke	0	0	×		0.1	0.1	200		Adjust Elec Auto Choke	
0 X 0.3 512 Unscd C F X 2.0 4.0 512 Unscd C X 0.5 4.0 512 Unscd C X 0.5 550 Scd C X 0.5 600 Scd	S dum d	eal	ţu	ĵz,	×		1.6	3.2	512	Unscd		
C X 2.0 4.0 512 Unsed C C X 0.5 550 Scd C C X 0.5 600 Scd	Starter	h.	0	0	×		0.3	0.3	512	Unscd		
c c x 0.5 550 Scd	Priner	gnl4 :		E4 .		×	2.0	4.0	512	Unscd	EPR L7-13	
C C X 00.5 600 Scd	Service	9 4	U	Ü	×		0.5		550	Scd	50-hour service	
	Service Engine.	9 J	υ	υ	×		0.5		009	Scd	Final Technical inspection.	

APPENDIX III-C

	REMARKS		01	50-hour service	50-hour service	EPR L7-	EPR L7-1	Final Tech. Insp.
	REASON PERFORMED		6	Scd	Scd	Unsed	Unscd	Sco
	LIFE H-HOURS		6 0	20	110	110	110	150
	ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS	2	0.5	7. 0		0.3	0.5
	MAINT	CLOCK		0.5	0.4		0.3	0.5
	TM	NO	9					
	TM	ADE- QUATE	ຄ	×	×	×	×	×
LEVEL	ACREW N CT RAL	PED OF	4	O	ပ	0	0	U
MAINT	C-OPER/CREW O-ORGZN F-DIRECT H-GENERAL	PRE- SCRIBED	E	ပ	O	0	0	ပ
	GROUP COMPONENT	S	~	Service Engine	Service Engine	Check Valve	Control Panel Assembly	Service
	GROUP		-	0)	0010	\$505	0607	8

APPENDIX III-C

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	REMARKS		01										Reviewed-not performed.			
	REASON PERFORMED		đ				si s	n His His	Sim			N H			sim mis	
nance	LIFE H-HOURS	e E	8					្តី	ı.S			ស្តីស្ត	1		ະ ໝູ່ໝູ	
Simulared Reviewed Maintenance	ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS	7					4.01				1.00 1.00	闰		i 0.1	
d Review							0 -	100	7.(0 4.0	편 일 (0		 	
Tarod at	T M INSTRUCTIONS	- INADE-	9	····												
N THUS	- RSA	- ADE -	80				××	××	× —			××	: ×		<u>×</u> ×	
LEVEL	. €	RECOM	4		·		ပေ) D 🔄	Ħ			00) [z-i		00	
MAINT	C-OPER/CR O-ORGZN F-DIRECT H-GENERAL	PRE- SCRIBED	Ю				ပဝ	DН	н			0 =	: F4		00	
	GROUP COMPONENT NO. AND RELATED		2	Eligine:	Engine Assembly	Engine, Gas-	Inspect	Scrvice Replace	Overhaul	FUEL SYSTEM:	Tunks, lines, Fittings	Tank Scrvice Retlage	Reprir	Lines, Fis-	Inspect Replace	
	GROUP NO.		_	r;	0100	0010			T-C	6	9080	3236		3.50		

APPENDIX III-C

REMARKS		01				Reviewed-not performed.				
REASON PERFORMED		6		Sim			Sin Sin Sin		Sin	
LIFE H-HOURS		8		មួយ			រី		1.S	
ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS			0.2		O.E E	0 0 0 4 0 0 0		0.4	
ACTIVE MAINTEN	CLOCK HOURS			0.2		E 1.0	0000 1.000		2.0	
TM	INADE- QUATE	9		·		×				
TINSTRI	ADE -	2		×			***		† 4	
LEVEL /CREW N CT	RECOM- ADE- MENDED QUATE	•		0		0	0 00		0	
MAINT LEVEL C-OPER/CREW O-ORGZN F-DIRECT H-GENERAL	PRE- SCRIBED	3		0		0	0 00		[4 O	
COMPONENT AND RELATED	S	2	EXHAUST SYS- TEM	Muffler and Pipes Replace	ELECTRICAL SYSTEM	Control Panel Repair	Batteries, Storage Inspect Service Replace	KEAR AXLE	Rear Axle Assembly Replace	ATEST ALD
GR:OUP NO.		-	-: : -:-	2/10	8	111-0 2007	361	뒴	() () ()	Ca ¹ , r 1

AFPENDIX III-C

REMARKS		01	Reviewed-not performed.			Reviewed-not performed.	Reviewed-not performed.		
REASON PERFORMED		6	Sir	Sin Ris					Siy sin
LIFE H-HOURS		8	11S4	n n n	•		· ·		"S" "S"
ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS	7	0.1 E0.5 E0.5	0.0 0.0 0.0		0.5 E 2.0	ота ота		0.1 0.1
TM	- ADE - INADE -	9	××	***		×	×		××
VEL	RECON	4	00	voo		Œ	ĵ z 4		υC
MAINT LE C-OPER/CR O-ORGZN F-DIRECT H-GENERAI		EO.	00	000		Ĩ¥ι	្នែ		Đ ···
GROUP COMPONENT NO. AND RELATED	OPERATIONS	2	Wheel Acur Service Repoir	Tired, Tubes Expect Service Repair	FRANE, TOW- LIG ATTACH- MENTS AND DRAWBAR	Frame Repair	Drow Bor Reposir	JODY CHASSIS OR HOLL AID ACCESSIVY ITES	66 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
GROUP NO.		-	() ()	2513	€ N . d	다. 건 건	", u)		

APPENDIX III-C

GROUP NO.		MAINT	LEVEL							
٠	COMPONENT AND RELATED	C-OPER/CREW O-ORGZN F-DIRECT H-GENERAL	ACREW N CT RAL	TAINSTRUG	CTIONS	ACTIVE MAINTENANCE TIME		LIFE H-HOURS	REASON PERFORMED	REMARKS
<u> </u>	S	PRE- SCRIBED	RECOM- ADE-	ADE-	NADE-	CLOCK	MAN- HOURS	Z-E-E		
	2	3	•	S	9	7		60	6	01
-	Dodo Platez Kaplaco	Ö	0	×		2 . 0	0.2	#8 _#	Sim	
	PUMPS			**************************************						
	Pum Assembly Inspect Service Replace	O O F	D D F	× × ×			0.04 1.04	ង ត នៃ ត	S mis	
	Riptir Ov rhaul	F4 III	年出	××		0 0 0 0 0	0° 7 7 1	# S2	Sim	Reviewed-not performed.
- 1	Shofts, impoliers, Bearings, Seats Adjust Replace	لتبلتب لتب	إتدا اتدا	×××		60.00 00.00 00.00	500 B	ະ ະ ໝັນ. ະ ະ	Sim	Reviewed-not performed.
	S.ction and Disconness Assembly:	0.0	0	×		0.0	0.0	 	Sim Sim	
	Par Drive						·			

III-C-7

APPENDIX III-C

REMARKS		01		Reviewed-not performed.		
REASON PERFORMED		6	Sim			
LIFE H-HOURS	M-MILES	8	ָבָּ בַּ בַּ			
ACTIVE MAINTENANCE TIME	CLOCK MAN- HOURS HOURS	7	0.1	E 1.0 E 1.0		
TM	NADE-	9	××	×		
	RECOM- ADE -	*) [4	Ēt,		
MAINT LEVEL C-OPER/CREW O-ORGZN F-DIRECT		60	() F4	ŀτι		
GROUP COMPONENT	OPERATIONS	2	10 (10 to 10	3) - 15 Cont - 16 Part - 17		
GROUP		-			111_C_8	

PARTS ANALYSIS CHART

1t : #H2-48

		REMARKS		8	50-Hour Oil Change		R 17-12.	EPR L7-12.	EPR L7-1.		
! 	REASON	USED		7	°pos	Scd.	Unscd. EPR 17-12.	Unscd. EF	Unscd. E		and the second s
	PART LIFE	H-HOURS M-MILES		9	Н 0°05	100°0 н	н о•огг	н 0.0гг	H 9.011		
ICE LEVEL	CREW	IONAL	RECOMMEND.	S	೮	υ	ᄕᅺ	0	0		
MAINTENANCE LEVEL	C- OPERATOR / CREW	F-DIRECT O-ORGANIZATIONAL H-GENERAL	PRESCRIBED	4	ບ	υ	Ē	0	0		
	NOUN	NOMENCLA! URE		ю	Filter Element	Filter Element	Volute Casing	Check Valve Gasket	Control Panel Assembly (Tachometer)		
	FEDERAL STOK			2	2040-580-6302	940-580-6302 mr. nr.nr.	A001-M-36	A206-6-M36	в5-м - 96		
	ON 49	REF		-		8	- 050	II-D-1	26.57		

PARTS ANALYSIS CHART

Item #H2283

			MAINTENANCE : EVE	LE I EVEI			
9	FEDFRAL STOK	3	C- OPERATOR / CREW	CREW	PART LIFE	DEACON	
CROSS	NUMBER	30	F-DIRECT		H-HOURS	USED	REMARKS
REF			O-ORGANIZATIONAL H-GENERAL	IONAL	M-MILES		
			PRESCRIBED	RECOMMEND.			
-	2	en	+	2	9	7	Э
0010	2940-580-6302	Filter Element Oil	ບ	ບ	50.0 н	Scd	EPR 17-2
0010	2940-580-6302	Filter Element Oil	೮	ບ	100.00 н	Scd	
0100	2940-580-6302	Filter Element Oil	ပ	Ů,	150°0 н	Scd	
0010	2940-580-6302	Filter Element Oil	೮	υ	200°0 Н	Scd	
00100	2940-580-6302	Filter Element Oil	೮	v	250.0 H	Scd	
0010	2940-580-6302	Filter Element Oil	ບ	υ	н 0°008	Scd	
0070	2940-580-6302	Filter Element Oil	υ	υ	н o•o4s	Scd	
0010	2940-580-6302	Filter Elemert Oil	υ	Ö	н 0°00†	Scd	
0100	2940-580-6302	Filter Element Oil	υ	ß	н 0°05†	Scd	

PARTS ANALYSIS CHART

REMARKS	8		failure.							·
REK		EPR 17-4.	EPR L7-8, Failure.		EPR L7-11.	EPR L7-11	EPR L7-3.	EPR L7-5.	EPR L7-11.	
REASON	7	Unscd	Unsed	Unscd	Unsed	Unsed	Unsed	Unsed	Unsed	
PART LIFE H-HOURS M-MILES	9	200°0 H	316.0 н	350.0 Н	512.0 H	512.0 H	225.0 н	250.0 н	512.0 H	
CRE WECEL CONTROL RECOMMEND	S	0	드 4	0	O	o	0	0	. 0	
MAINTENANCE LEVEL C- OPERATOR / CREW F-DIRECT O-ORGANIZATIONAL H-GENERAL PRESCRIBED RECOMME	+	0	0	0	0	0	0	0	0	
NOUN	67	Choke Assembly Automatic Solenoid	Magneto	Motor, Starter	Motor, Starter	Solenoid, Starter	Motor Tachometer	Lack pin	Impeller	
FEDERAL STOK NUMBER	2	MFG PART NO. 13206E0809	2920-867-8827	2920-882-3401	2920-882-3401	MFG PART NO. 13213E3286	MFG PART NO. 812831	MFG PART NO. BOO4-M36	MFG PART NO. AOO2-M36	
Item #42283 GP NO. FE CROSS REF		0315	, 6090	0603	6090	0603	2090	1501	5501	

PARTS ANALYSIS CHART

.em #H2283

COSSIL MACE	602		MAINTENANCE LEVEL	NCE LEVEL			
6 ₹	FEDERAL STOK	MOOM	C- OPERATOR / CREW	CREW	PART LIFE	REASON	
CROSS	WUNDE:	8	F-DIRECT O-ORGANIZATIONAL H-GENERAL	JONAL	H-HOURS M-MILES	USED	REMARKS
			PRESCRIBED	RECOMMEND.			
-	2	3	•	5	9	7	•
5501	MPG PART NO. A003-M36	Sleeve Shaft	0	0	512.0 н	Unscd	EPR L7-11.
5501	MPG PART NO. ROO4-M36	Pump Seal	0	0	512.0 н	Unscd	EPR 17-11.
5501	MFG PART NO. AOO9-M36	Plate Seal	0	0	512.0 н	Unscd	KPR 17-11.
5501	MFG PART NO. NOIO-M36	Gasket	0	0	512.0 н	Unscd	EPR 17-11.
5501	MFG PART NO.	Inter Assy	0	•	512.0 H	Unscd	EPR 17-11.
5501	MFG PART NO. A907-1/36	Shim Set	0	0	H 0.413	Unscd	EPR 17-11.
5501	MFG PART NO. A909-M36	Primer Plug	Æ	β 4	512.0 H	Unscd	EPR 17-13.
-		•			-		

III-D-4

APPENDIX III-E

MAINTENANCE PACKAGE LITERATURE CHART

	Remsaks	6	Satisfactory	Changes submitted EPR L7-10 Electrical diagram submitted EPR L7-14
Form 1598	Reference No.	80	. None	EPR L7-10 31 Dec 68
ıtion	Inadqt	1		×
Evaluation	Adqt	9	×	
Received	Materiel	5	21 Aug 68	21 A ug 67
Date	Lit	7	21 Aug 68	Aug 67
Manyscript	Title	3	Organizational DS and GS Maintenance Manual; Engine, Gasoline, Military Standard Models (Model 4-A084-II)	Operation, Maintenance and Overhaul Manual with parts list. Schleyer Model No. 36M-SPS 3011G-T, Pump, Centrifugal Gasoline Engine Driven
Man	Qty	2	-	→
-	Number	1	TM 5- 2805- 204-14	Contract No.DAAK 01-67- C-A019

	EWOII MENT	PERFORM			
I FROM Commandir	ng Officer			E SYMBOL: STE	
	my General Equipment Te	st Activity	3 DATE:		August 1968
	Virginia 23801		4. EPR 1		
5.70 Commanding (ECOM PROJ NO	7-8-0961	-01
•	Mobility Equipment Comm	a.i.a	&E PROJ NO.		
ATTN: AMSME			RACT NO.	DAAK01-6	7C-A010
	llow Boulevard	1 -	TITLE		
St. Louis, N	dissouri 63120	Pumi		00 Gal/Min.	Water
A MAAE:			DATA		
	PS3011G-T			-2282	······································
	0-11			Hours	
isiarn. E. C.	Schlever Pump Co In	II. PART DA			
A MOMENCI ATURE / DEC	SCRIPTION Eng. 4A084II Ta				
15. FSN	BIR. 4NO411 12		PART NO.	102-812831	
IT. DRAWING NO.				Hercules En	gines Inc.
19. QUANTITY	One		T ASSEMBLY		
ZI.STD. GOVT. GRP.			T TEST LIFE	O Hours	
	1	LINCIDENT		4- 4	
23.08SERVED DURING	24. TEST ENVIRONMENT		DENT CLASS	26.	ACTION TAKEN
s. OPERATION			EFICIENCY		e. REPLACED
D. MAINTENANCE	POL Test Area		HORTCOMING		D. REPAIRED
X . IP Test	102 1030 1100		UG. IMPROVEM	ENT	c. ADJUSTED
		6.1	THER		d. DISCONNECTED
	<u> </u>				e. REMOVED
27. DATE AND HOUR OF	INCIDENT 1300 hours, 20	August 1968			f. NONE
	IV. INC	IDENT DES	CRIPTIO	N	
When engin was inoperative	ne was started to perfo	rm IP Tests,	it was no	ted that the	e tachometer
was inoperative				ted that the	e tachometer
vas inoperative	AL SENY TO: EXT OF PREPARER WELL	a shortcomin	THE COMMAN		

		EQUIPMENT PER	RFORMAN	ICE REPO	RT
I FROM	Commanding O	ficer		1. OFFICE SYMPOL:	STEGE-SS-MED
{	U.S. Army Ger	neral Equipment Test Act	tivity	3. MTE: 14 Oc	
	Ft Lec, VA 2			4. EPR 10.	1.7-2
5 70	Commanding Ge	meral	6. USATECOM	PROJ NO.	7-8-0961-01
		ility Equipment Command			
	ATTN: AMME-		CONTRACT	NO. DA.	AK01-67-C-A010
	4300 Goodfell		7. 7887 7171	.E Pump Cent	, 600 Gal/Min, Water
	St Louis, Mis				, ooo garrigan, water
		LMAJO			
8. MODEL		SBOLIGT	9. MRIAL M		н-2283
O QUANTI		·	IL LIFE PER	100	50 hours
iz efa.	E.C. S	chlever Pump Co. Inc.	IS.USA NO.		<u> </u>
			A PARTA		
H. NOWEN	CLATURE / DESCRIPTION		ssembly Ai	r Inlet	
IS. FEA	2520-8	67-8819	M. MFR. MA	7 110.	13206E0550
17, DR.50(1)	6 NO. N	/A	14. 107文.		97403 FRDL
IS. QUANTI		<u>l</u>	30. HEXT ASS	IERTLY	Engine Block
21.5°0.60	yt. 629 . 0	106	22 MART TES		50 hours
		11 A K	DENTOA		
23.08SERY	red puring dan	PA. TEST ENVIRONMENT	ST INCIDENT	CYM	DR. ACTION TAKEN
a. OPEI			a. DEFICI	ency	A BOX ACCO
X & MAIR	ITEMANCE	River Test Site	I B. SHOAT	COMMS	A DEPAISED
{4.			Y 8, 846, 14	PHOPENENT	L AR-WETER
			L OTHER		1. DI PODE MONTES
		·			A RIVER
ET. DATE A	HO HOUR OF INCIDENT	9 October 1968	0900 hour	C S	X . See block
		A THE PLAN	T DESCRI	PYTON	

28. DESCRIBE INCIDENT FULLY

(Reference TM 5-2805-204-14, page 42, figure 38; Lubrication Order 5-2805-204-14, page 13, figure 6)

- a. The crankcase breather assembly is not accessible for removal with tools found in the general mechanics tool set (FSN 5180-754-0641) when the engine is hot.
- b. Removal of the breather assembly during the 50 hour service on the hot engine tends to burn the repairman's hand because of the insufficient work space. Improvised tools (i.e., cam lock pliers) will be used and damage to breather assembly will result.
- c. The 50 hour scheduled service is easy to neglect because of the difficulty and hazard involved, and contributes to premature engine failure.
 - d. Improper design is considered to be the cause of this incident.
- e. Redesign of the breather assembly to permit removal with a socket wrench on top is suggested.

SO. DEFECTIVE MATERIAL SENT TO:	N/A
SO, MANE, 1. /LE & YEL EXY OF FREMMER	SI. POR YNE GGLEGARDER!
:	stitute) lufe
JUSEPH T. HARVEY	ROBERT A. NULK
Equip Spec (Gen)	MAJ, CRD
ext 1006	1V-2 Chief, Maintenance Evaluation Div

Bost Available Cop

EQUIPMENT PER	RFORMANCE REPORT
1 FROM Commencering a filterial	2. OFFICE SYMBOL: STEGF-TE-S
6.5. Army General Equipment lest Activ	
Fort Lee, Virginia 23801	4. EPR NO. 1.7-3-(1-2)
5.70 Commanding General	6. USATECOM PROJ NO. 7-8-0961-01
U.S. Army Mability Equipment Command	ROT BE PROJ HO.
ATIN: AMSME-QRT	CONTRACT NO. DAAKOl+67-C-A010
4300 Coodfollow Boulevard	ATEST TITLE Initial Production Test of
St. Louis, Missouri 63120	Pump, Centrifugal, 600 GPM
	R ITEM DATA
8. MODEL 3 (01-5030) 1 G-T	9. SERIAL NO. H-2283
IO.QUANTITY 2	ii. Life Perioo 230 hours
RAMFR. E. C. Schleyer Pump Co., Inc.	PRUSA NO. N/A
	ARY DATA
M. NOMENCLATURE / DESCRIPTION Tachometer	
is. Fsii None	16. MFR. PART 110. 812831
17. DRAWING NO. N/A	16. MFR.: 57733
IR QUANTITY ONE	20.NEXT ASSEMBLY Control Panel
21.370. 80v7. 689. 0607 - Control Panel	22. MART TEST LIFE 230 hours
u, inc	IDENT DATA
23. OBSERVED DURING 24. TEST ENVIRONMENT	25. INCIDENT CLASS 26. ACTION TAKEN
X a. OPERATION River test site	a DEFICIENCY A REPLACED
b. MAINTENANCE	X 1. SHORTCOMMS 1. REPAIRED
ē.	e. SUS. IMPROVEMENT
	4. OTHER 4. DISCOMMECTED
	e. REMOVED
27. DATE AND HOUR OF INCIDENT 1600, 12 Nov 68	X I. NONE Sec 28
D'. INCIDEN	IT DESCRIPTION

20. DESCRIBE INCIDENT FULLY

a. Tachometer readings fluctuated from 3000 to 3200 rpm over an extended period. At the time of the incident, the tachometer indicated less than 100 rpm. Check test with instrumented periable tachometer indicated that engine was running at pre-set 3200 rpm (Page 8, para 2-10-6, manufacturer's manual). Operations continued, and maintenance was deferred until regular acheduled 250-hour quarterly maintenance service.

b. Incident is classified as a shortcoming pending evaluation of repairs required.

29. DEFECTIVE MATERIAL SENT TO: N/A

30. NAME, TITLE & TEL EXT OF PREPARER

THOMAS N. HORGAN, 114, 196 lest Officer, MHE/POL Pamin lest br ext 1585/1697

STE Form 1025, 18 DEC 67 REPLACES AMSTE Form 1025, 1

31. FOR THE COMMANDER:

DAVID P. JAMES, Acting that I MRE/POL Egyppment Test branch

MRE POL Equipment Test branch Service lest Division, Testing Pires

3 USATECON REGULATION 705-4

	EQUIPMENT PERI	FORMANCE	REPORT
LEPON TOTAL	dang Atfacer	2. OFFICE	E SYMPOL: STECE-SS-E
	rmy General Equipment Test Acti	vity 3.DATE:	21 November 1968
	ee, Virginia 23801	4. (90 1	
	ding General	6. USATECOM PROJ NO	7-8-0961-01
	rmy Mobility Equipment Command	PROT & E PROJ NO.	
	AMSME-QRT	CONTRACT NO.	
	oodfellow Boulevard	7. TEST TITLE Pur	mp, Centrifugal, 600 GPM
St. Lo	uis, MO. 63120 L WAJOR	TEM DATA	
1600F1 16	N-SPS 3011 CT	9. SERIAL NO.	H-2283
LOUANTITY 36))	IL LIFE PERIOD	250 hours
	C. Schlever Pump Co. Inc.	18. VSA 110.	N/A
H 1. 5		RY DATA	
. SOMENCL ATURE / 80	Choke Assembly, Auto		
L FON N/		ME MER. PART NO.	13206E0809
. samme 110. 37		IG. INFR.	97403
QUARTITY		DO HEXT ASSEMBLY	Carbureçor
.STD. 90VT. 90P.	03.12	22 MAT TEST LIFE	250 hours
	11.[d]	DENT DATA	
PHINNS CHARGESON	24. TEST ENVIRGNMENT	es incident class	de action thats
a. OPERATION		e deficiency	e seplaces
X & MANTENANCE	GETA Maintenance Shop		A SERVICE
c.		C BAC INSOCALIN	
	•	T OTHER	4. September 19
	1016	<u> </u>	
T. BATE AND HOUR OF			X & COX See block
		DESCRIPTIO	7
P DESCRIBE INCIDER	T FULLY	ı	
	antomatic choke failed to functorly maintenance.	tion when cold	start of engine was required
	· · · · · · · · · · · · · · · · · · ·		!
b. Test	in with a multi-meter revealed	i an open circu	it in the automatic choke
	e of shortcoming is unknown.		
d. Test	ing of the major item will cont	tinue.	
	burd choke will be used when ne		

- i. The band choke will be used when necessary until a replacement automatic choke assembly is obtained.
- t. A temperature sensitive (thermal) type choke is recommended over the present electrical type which appears to be (2 position) completely open or completely closed.
- 2. Request documentation regarding operation of the automatic choke and basic requirement for an electrical type choke on the test item be furnished this command, ATIN: STEGE-SS-E.

29. DEFECTIVE MATERIAL BENT TO:

SO. MANY, TITLE & YEL EXT OF PROPRIET

JOSEPH T. HANVET Equip Spec (Gev) MED. SSD, ext 1006 II. PAS-THE COMMINGER!

ADBERT A. NULK

MAJ, ORD

Chief, MED, SSD

Best Available Copy

IV-4

THE WAYEGE PERFORMS YELL

EQUIPMENT PERI	FORMANCE REPORT
FROM Commanding Officer U.S. Army General Equipment Test Activ Fr. Lev. VA 23801	4. EPR 110. 1.7-5
9.70 Communding General U.S. Army Mobility Equipment Command ATTN: AMSME-QRT	RETAIL PROJ NO. 7-8-0961-01 RETAIL PROJ NO. CONTRACT NO.
4300 Goodfellow Boulevard St. Louis, NO 63120	7.7687 fitt. Pump, Centrifugal, 600 GPM
MAJOR	THE DATA
A MOOCL 36N-SPS 3011 GT	8. 9001AL NO. H-2283
DO QUANTITY 2	LLIPE PERIOD 250 hours
E.C. Schleyer Pump Co. Inc.	31.USA NO. N/A
	.Y :: Y \.
14. HOWENCLATURE / DESCRIPTION Pin, Anchor on Trai	ller
N/A N/A	MG. MFR. PART NO. B003-M36
17. DRAWING NO. N/A	E.C. Schleyer Pump Co. Inc.
M. OLLUTITY 3	SOLUCIT ASSENSLY Trailer Frame
21.879. 60/7. 60/. 1501	MAT TEST LIFE 250 hours
	DENTERNA
22 ORDENYED BURING PA. TEST ENVIRONMENT	RE-MICHERT CLASS DE-ACTION TAKEN
a OPERATION	a. BEFICIENCY X A. REPLACED
x & MANITENANCE GETA Maintenance Shop	
t.	L. NA. IMPROVEMENT L. AB-MOTED
	4. OTHER 4. DISCON HISTES
	a. Attorita
27. DATE AND HOUR OF INCIDENT 19 November 1968,	
	DESCRIPTION

BE CESCRIBE INCIDENT PULLY

- a. During quarterly maintenance inspection, the lock pin on the right side of the trailer was observed missing and assumed lost during movement from the test site to the maintenance shop. The lock pin is attached to the test item frame with a chain and split ring. The ring opening is covered by wrapping with friction tape, as are the other 2 lock pins on the test item.
- b. The friction tape had slipped away from the ring opening, permitting the pin to separate from the chain and apparently was lost.
- c. The method of retaining the lock pins by covering the ring opening with friction tape is not considered satisfactory.
- d. Additional study is being made of the incident and recommendations for improvement will be submitted.

29. DEFECTIVE MATERIAL SENT TO: 36. MARE, TITLE & TEL EXT OF PREMARER

STE Form 1088, IS DEC BY NEW ACES ABOVE Form 1028

JOSEPH T. HARVEY Equip Spec (Gen) MED, SSD, ext 1006 ROBERT A. NULK

MAJ, ORD

IV-5

Chief, MED, SSD

USAYECOS MEDILAYION YOU-E

-	وروب برورو المامه الإنهام والمواجع المامه المواجع المام		PPENDIX IV	'C DE	M67
		EQUIPMENT PE			
I. FRCM	Commanding Off				STEGE-SS-E
		ral Equipment Test A		. EP2 10.	November 1968
8.70	<u> Tari las Vir</u>		IL USATECOE P		SPECIAL See Block 28
3.14	Commanding Ger	lity Equipment Comma			366 F.OCK 20
	ATIN: AMSME-0		CONTRACT P		
	4300 Goodfelid		7. TEST TITLE		
		-curi- 53120			lock 28
			OR ITEM OAT		
s. wooca			e senal no.		
P QUL NT	16.		BL LIFE PERIOR	<u></u>	
T.M.S.			JA VIA MA	-	
			PART DATA		
14. SPEC: 16. FSE	ICLATURE / BESCRIPTION	Tachomet	er (Electrica)		and \$12811
7. 98.0 01			10. 1172.		c Warner
B. COLUT			DO. NEXT ASSE		ngine
	WT. 98P.	.1	22 PART 1887		30; 225; 344 5 hrs
		01161	CIDERT DATA		
11.000	MES MIRING	SH TEST PHYMONINGST	A's INCIDENT C		MR. ACTION TRACKS
4. 00	ERATION		X 4. DEFICIEN		X to colucte
A 194	Michael		A SHARTCO	474	9 86541858
Y L	See Block 28		a. 2010. 100.P	THERESPO	IL AMBERTED
	•	1	T COLRES	***********	d. Dipage warres
		<u></u>			4 seneves
n. Mil	THE HOME OF INCIDENS				1, 400%
		TR. INCID	र र का अस्ति।	IION	
m desc	nine incapent fully				
_	Bundan takat	l mundustian tasta o	f sha 200 com	Caneni fe	gal Pumps (USATECOM Project
. a	. During initia	the 600-CPM Central f	Di the 2004GPM	Centilio Catecon P	roject No. 7-8-0961-01),
					No. 102-612831 and 812831)
	red on all test			,	in the state and states,
		(),			
ģ	. Repeated mali	unctions of a single	component da	separate	equipment appears signif-
					procurement of items using
the c	omponent. Wheth	er or not this tacho	meter is used	on end $\boldsymbol{\mathfrak{t}}$	tems other than those
liste	d <mark>above is unkno</mark>	wn at this time.		•	
				_	
			ne problem area	s and su	pporting data which docu-
ment	the component ma	liunctions.			
					· ·
	m1 1 1 1				her as a deficiency insofar

classified as shortcomings with regard to the mission accomplishment of the end items to which they were attached. One or more of the aspects of quality control, accuracy, reliability, durability, and application have caused the tachometers to be inadequate for the

(Continued)

ROBERT A. NULY, MAJ, ORD, Chier, MED, SSD

performance of their intended functions.

JOSEPH T. HARVEY, Equip Spot (Cen)

ere for 1885, in sec of members have have less,

80. DEPECTIVE MATERIAL BENT TO: 30. MARY, VITLE & YEL ERY OF PREMARE

MED, SSD, exc 1006

STEGE-SS-E

EPR NO.: SPECIAL

Block 28, Continued:

- e. It is recommended that:
- (1) An investigation, study, or test be conducted to identify and correct the problem.
- (2) Consideration be given to use of a mechanical tachometer in place of the electrical tachometer on the aforementioned items.

USATECOM Project Nos. 7-7-0784-01 and 7-8-0961-01

STEGE-SS-E EPR No.: SPECIAL

Problems concerning the tachometer were as follows:

- 1. One tachometer tested upon receipt was inaccurate by 800 rpm, indicating a need for improved quality control.
- 2. Another tachometer was tested after 30 operating hours and was found to be inaccurate by 400 rpm, indicating a possibility of poor quality control or low reliability.
- 3. Two additional tachometers developed malfunctions at 225.0 and 344.5 test hours respectively, indicating a high mortality rate.
- 4. Electrical schematic wiring diagrams, furnished with the test items, were not identical to actual wiring of the test items, thereby causing additional problems during corrective maintenance.
- 5. The actual wiring of the two test items using the same tachometer and control panel was not identical and did not conform to schematic wiring diagrams as furnished by the manufacturer.
- 6. Two organizational maintenance personnel assigned to the test projects were not knowledgeable about troubleshooting the tachometer and its associated component: electrical sender, Mfr. No. 811532. Either additional troubleshooting information should be included in the literature or additional training should be provided for the mechanics (62820 and 63C20).
- 7. A combined mechanical tachometer/hour meter used on the 350-GPM Pump (FSN 4320-916-9172) appears to be more reliable and would eliminate the electrical problem areas.

USATECOM Project Nos. 7-7-0784-01 and 7-3-0961-01

and 1

STEGE-SS-E

EPR NO.: SPECIAL

END ITEM	EPR OR REPER- ENCE	DATE OF EPR	TEST HRS OF PART	NAME AND MER OF COMPONENT	MFR PART NUMBER	MALFUNCTION
200-GPM Centrifugal Pump, Gorman-Rupp, 392664, (USATECOM 7-7-0784-01)	1.7-10	16 Aug 68	344.5	Tachometer Stevart- Warner	102-812831	Indicator (Needle) fell off its shaft
200-GPM Centrifugal Pump, Gorman-Rupp, 392632, (USATECOM 7-7-0784-01)	Eng. 2 Test Report Input,	20 Jun 68	30.0	Tachometer Stewart- Warner	102-812831	Inaccurate by 400 rpm
600-GPM Centrifugal Pump, GED 4", Wheel Mtd, E.C. Schleyer, H2283, (USATECOM 7-8-0961-01)	L7-3- (1-2)	13 Nov 68	225.0	Tachometer Stevart- Warner	812831	Indicator fluctuated and then dropped to 100 rpm. Engine speed continued at 3200 rpm
600-GPM Centrifugal Pump, GED 4", Wheel Mtd, E.C. Schleyer, H2282, (USATECOM 7-8-0961-01)	1.7-1	21 Aug 68	0.0	Tachometer Stewart- Warner	812831	Inoperative on receipt

USATECOM Project Nos. 7-7-0784-01 and 7-8-0961-01

Inel 2

		Ε	QUIPME	NT PE	RECKMAN	ICE I	KEPUR			
FROM	Commanding US Army Ger			Test Activi	itv	J. OFFICE	SYMBOL:	STE 29	GE-TE-T Novembe	r 1968
	Fort Lee.			test Metty	LLy	4. EPR N).	L7-		
.10	Commanding				6. USATECOM			7-8	-0961-0	[
	US Army Mot			Command	ROT & E PI					
	ATTN: AMS	•	Equipment	Communic	CONTRACT					
	4300 Goodfe		ouleverd		7. TEST TITL					
	St. Louis.					•	Pump,	Cent	rifugal	, 600 GPM
	J. J. VILS	1103001		I. MAJO	R ITEM DA	A				
MODEL	36M-5	PS 301	1 GT		9. SERIAL NO		H-2283			
THAUQ.		<u> </u>	<u> </u>	······································	II. LIFE PERI		20 hou			
MFR.		Schle	yar Pump (lo. Inc.	13.USA NO.	-	NA			
		771.4			ART DATA					
. MOME	HCLATURE / DESCI	PIPTION	Ticdown E		AUL BAUA					
FSN	UNK		1000	100	IG. MFR. PART	NO.	UNK			
_			Po 2. Oper	Maint & O				Sch1	ever Pu	mp Co., In
. GLIANT	rity Man	4	A	110-21:0 0	20. HEXT ASS	EMBLY	Frame,			
	SOYT. GRP.	18			22. PART TES		20 hou			
				III. IN	CIDENT DA					
COSE	RVED DURING		24. TEST ENVIS		25. INCIDENT			26.4	CTION TAKE	**************************************
	ERATION				e. DEFICI				REPLACED	
	LINTENANCE				X b. SHORT				REPAIRED	
_	ail Humping	Test	Poil Two	ansportabi!	2002		NT	_	. ADJUSTED	
	arr numbring	1636	Kall II	insportabl.	4. OTHER				. DISCONN	
									I. XLBUYLO	
	AND HOUR OF U	CIDENT	1530	hours, 27	November 19	68			. REMÓVED . NOMÉ	
7. DATE	AND HOUR OF UNRIBE INCIDENT F During the securing the	ULLY 8 MPH	railcar hu	. NC DE	November 19 NT DESCRI the 4 tiedow fractured.	PTION	<u>-</u>	X (. NONE	
DATE	RIBE INCIDENT F	ULLY 8 MPH	railcar hu	. NC DE	NT DESCRI	PTION	<u>-</u>	X (. NONE	
DESC	RIBE INCIDENT F	SENT TO	railcar in to the pu	. NC DE	the 4 tiedown fractured. 31. FOR THE	PYION n eyes	bent an	X (. NONE	
DESC	During the securing the securin	SENT TO	railcar in to the pu	amp test, to imp frame in	the 4 tiedown fractured. 31. FOR THE DONAY Actin	COMMAN ON F.	bent an	d 5	. NONE	

	•	APPEN	DIX IV		
	E	QUIPMENT PERF	ORMAN	ICE REPOR	RT
I FRO	Commanding Officer	7		2. OFFICE SYMBOL: S	TEGE-TE-S
		Equipment Test Activit	y	3. DATE: 5 December 1968	
	Fort Lee, Virginia			4. EPR NO.	L7-7
5. TO	Commanding General	1	6. USATECOM	PROJ NO. 7-	8-0961-01
	U.S. Army Mobility	y Equipment Command	ROTAEP	ROJ NO.	
	ATTN: AMSME-QRT	·	CONTRACT		67-C-A010
	4300 Goodfellow Bo	oulevard	7. TEST TITLE Initial Production Test of Pump,		
	St. Louis. Missour	1 63120		ugal. 600 GPM	
		I. MAJOR	ITEM DA		
O. MOD	EL 36M-SPS3011G	-T	9. SERIAL NO		
O.QUANTITY 3				00 300 hours	
IZ. MF	E.C. Schleyer	r Pump Co. Inc.	13.USA NO.	N/A	
			PT DATA		
	MENCLATURE / DESCRIPTION_	Wire from Tachometer S			ter. Engine 4A084II
15. FSA	The second secon		IG. MFR. PAR		
11. Surante no. 1 TV 12		IS. MFR. Stewart and Warner			
	INTITY one		20. HEXT AS		
21.ST0	GOVT. GRP.		22. PART TES		rs
		II, INCID			NO. ACTION TANGE
	SERVED DURING	24. TEST ENVIRONMENT	25. INCIDENT		88. ACTION TAKEN
	OPERATION	Beach test site,			المقاللات ببب النبات سميها للمستقول والمراج البريج المراج الأمي الأميان الأوارات الأوارات الأوارات
_	MAINTENANCE	Fort Story, VA	X b. SHORT	PROVEMENT	e ADJUSTED
 !"		,	4 OTHER		d. DISCONNECTED
				1	e. HEMOVED
00 04		2.7. (2. 2002			X f. NONE
27. DA	TE AND HOUR OF INCIDENT	2 Dec 68, 0900 LV. INCIDENT	NECED	PTIAN	13 11. 404.5
20 00	SCRIBE INCIDENT FULLY	LE. INCIDENT	DESCRI	FIION	
the rep Pag	ched between the to engine for performanced, this wire be e 21, TM 5-2805-204 b. From a perform	nding from the tachomet op and bottom shrouds of mance of daily maintena ecomes pinched unless e 4-14, Jul 65. mance viewpoint, this i	f the engince on the xtreme can be considered	gine. The top ne engine. Who are is exercise ered a shortcom	shroud is taken off en this top shroud is ed. Reference Fig 12, ming because no
dai	ly maintenance.				:

31. FOR THE COMMANDER:

THOMAS M. HORGAN, 1LT, TC, Test Officer
Fort Story Test Facility
AUTOVON 555-1420, ext 5104
STE Fum 1025, 18 DEC 57 REPLACES AMSTE Form 1025,

TV-11

TOTAL DENNIS B. SULLIVAN, MAJ, QMC
Chief, MHE and POL Equipment Test Branch
Service Test Division. Testing Directorate
STE Fum 1025, 18 DEC 57 REPLACES AMSTE Form 1025,

TV-11

TUSAVECOM RESULATION 705-4

29 DEFECTIVE MATERIAL SENT TO: N/A 30. NAME, TITLE & TEL EXT OF PREPARER

8	EQUIPMENT PERF	ORMANCE REPORT
1 FROM Commanding Office	r	2. OFFICE SYMBOL: STEGE-ST-M
	Equipment Test Activity	
Fort Lee, Virgin		4. EPR NO. L7-8
5.70 Commanding Genera		6. USATECOM PROJ NO. 7-8-0961-01
	y Equipment Command	ROT & E PROJ NO.
ATTN: AMSME-QRT	, , , , , , , , , , , , , , , , , , , ,	CONTRACT NO. DAAKO1-67-C-A010
4300 Goodfellow E	Boulevard	7. TEST TITLE Initial Production Test of Pump,
St. Louis, Missou		Centrifugal, 600 GPM
	I. MAJOR	TEM DATA
8. MOOCL 36M-SPS3011G-	Ţ	9. SERIAL NO. H-2283
O.QUANTITY 3		ILLIFE PERIOD 316 hours
2.MFR. E. C. Schleye	r Pump Co., Inc.	IS.USA NO. N/A
	- CPAR	TOATA
M. HOMENCLATURE / DESCRIPTION	Magneto	
6. FSH 2920-867-		M. MFR. PART NO. 13206E1280
7. DRAWING NO. N/A		18. MFR. Fairbanks-Morse
A SUANTITY 1		MONEXY ASSEMBLY Timing Gear
11.810. 60VT. 6RP. 0605		22 MART TEST LIFE 316 hours
	DULINGID	ENTERATA
13.00SERVED DURING		25. INCIDENT CLASS 26. ACTION TAKEN
X e. OPERATION	Salt water pumping	X a DEFICIENCY X a REPLACED
X & KAINTENANCE	operations, Fort Story,	a shortcoules la repaired
4.	Virginia	S. SUE. IMPROVEMENT S. ABAUSTED
		4. OTHER 6. PISCOM MECTED
		e. REMOVED
ET. BATE AND HOUR OF INCIDENT	4 Dec 68, 0930	f. HOME
	IX. INCIDENT	DESCRIPTION

28. DESCRIBE INCIDENT FULLY

- a. Test item engine would not start.
- b. Inspection and trouble-shooting revealed malfunction of the magneto (Serial No. 5805606).
 - c. Partial disassembly of the component revealed:
- (1) Center carbon contact point of distributor cap to rotor was completely worn out. Spring tension was gone, and the carbon contact point was rendered totally inoperative.
- (2) The contact point set (82796 22437H) plate was loose (four screws were only hand tight).
 - (3) 1/8" lateral movement was evident in the magneto drive gear.
- d. Incident is classified as a deficiency because it caused the engine to be inoperative.
- e. Cause of incident is attributed to faulty assembly of the magneto by the manufacturer.

29. DEFECTIVE MATERIAL SENT TO: Retained SO. NAME, TITLE & TEL EXT OF PREMARER

THOMAS M. HORGAN, 1LT, TC, Test Officer Fort Story Test Facility

AUTOVON 555-1420, ext 5104
SYE Form 1025, 18 DECEY REPLACES ANSTE Form 1025,

DENNIS B. SULLIVAN, MAJ, QMC

Chief, MHE and POL Equipment Test Branch

Service Test Division Testing Di

IV-12

	EQUIPMENT PER	FORMAN	ICE REPOR	RT			
I FROM Commanding Off	icer		2. OFFICE SYMBOL: S	TEG	-TE-S		
	ral Equipment Test Activ	lty		cemb	er 1968		
Fort Lee, Virs		-	4. EPR NO.		L7-9		
3.70 Commanding Gen		6. USATECOM	PROJ NO. 7-	8-09	961-01		
	lity Equipment Command	ROTAEPR	OJ NO.				
	ATTN: AMSME-QRT			CONTRACT NO. DAAKO1-67-C-A010			
4300 Goodfello	7. TEST TITLE Initial Production Test of Pump,						
St. Louis, Mis			fugal, 600 GPA	1			
	I. MAJOR						
8. MODEL 36M-SPS301		3. SERIAL NO					
O.QUANTITY 3		II. LIFE PERI	00 350 hot	irs			
	ever Pump Co., Inc.	S.USA NO.	n/a				
		RT DATA					
H. HOMENCLATURE / DESCRIPTION	ON Motor, Starter, 24v,		Actuated				
	-882-3401	IS. MFR. PART		13-	l <u> </u>		
	18, Item No. 5	ia. MFR.	Mili	ary	Standard		
IR QUANTITY 1		SO. NEXT ASS	EMBLY Engi	ne .			
21.8TD. 60VT. 68P.		22. PART TES	TLIFE 350 1	nour	s		
	m. Inc	DENT DAT					
21 OBSERVED DURING	24. TEST ENVIRONMENT	25 INCIDENT		26.	ACTION TAKEN		
Xa. OPERATION	Sait water pumping	e. DEFICI			a REPLACED		
L MAINTENANCE	operations, Fort	X & SHORT	COMING	\Box	A REMIRED		
4.	Story, Virginia		IPROVEMENT.		e. ADJUSTED		
	,	L OTHER			4. DI SCON NECTED		
					e. REMOYED		
27. DATE AND HOUR OF INCIDE	INT 10 Dec 68, 1100 hou	rs		X	f. NONE See para 28		
ET. MALIE AND MOSK OF INDISE	TYTHETHEN	DESCRI	PTION				

28. DESCRIBE INCIDENT FULLY

- a. Starter motor failed to function. Reason for malfunction is unknown. There was no difficulty in starting the pump manually.
- b. This is judged to be a shortcoming because the pump can continue to operate. If cause of malfunction can be determined, a supplementary EPR will follow.
 - c. EPR was telephoned to USATECOM 13 Dec 68, 1500 hours.

Ħ.	DEFECTIVE	MATERIAL	SENT TO:	N/A
	PRIME DIVI	7 2 77. 7	TEAP IN	4576

THOMAS M. HORGAN, ILT, TC, Test Officer Fort Story Test Facility

ITE Form 1025, 18 DEC 87 REPLACES AMSTE Form 1025,

II. FOR THE COMMANDER :

DENNIS B. SULLIVAN, MAJ, QMC

Chief, MHE and POL Equipment Test Branch Service Test Division. Testing Directorate

IV-13 USATECOM REGULATION 705-4

		EQUIPMENT PER	FORMANCE F	REPORT
I FROM		fficer neral Equipment Test Acti rginia 23801		19 December 1968 19 L7-98
5. TO	ATTN: AMSME 4300 Goodfel	bility Equipment Command -QRT low Boulevard	7. TEST TITLE ini	DAAK01-67-C-A010 tial Production Test of
	St. Louis, a	rssouri 63120 L MAJOR	TEM DATA	ifugal, 600 GPM
B. MODEL	36M-SP	\$3011 Ç- T	S. SERIAL NO.	н-2283
O.QUANTI		3	IL LIFE PERIOD	350 hours
IZ.MFR.	E.C. S	chleyer Pump Co. Inc.	ILUSA NO.	N/A
4 100000	CLATURE / DESCRIPTIO		A volt Solenoid	Actuated
S. FSH		82-3401	M. HFR. MAT NO.	MS53013
17. Dir AW10		, Item No. 5	IG. WFR.	Military Standard
IS BUANTI			20. NEXT ASSEMBLY	Engine
21.8TD. 60	VT. 009. 0603		22 MAT TEST LIFE	350 hours
		· #11(4)	1张10公人	
17 desta	LD bhuine	24. TEST ENVIRONMENT	ES INCIDENT CLASS	MA ACTION TAXEN
a. OPE	RATION	Salt Water Pumping	s. DEFICIENCY	a REPLACED
X F HYR	TENANCE .	Operations, Fort	X a. SHORTCOMING	XX A REPAIR (9
6.		Story, Virginia	e she improvemen	
		July, Viiginii	L OTHER	E. DI DOON MECTED
			<u> </u>	e. REMPYER
ET. DATE A	MO HOUR OF INCIDES			f. HOME
		IX. INCIDENT	DESCRIPTION	

es. Describe incident fully

(Reference EPR L7-9)

- d. Disassembly of the starter revealed corrosion on the armature and all internal parts of the starter.
 - e. This is attributed to the salt water environment.
- f. The starter was cleaned with dry solvent, dried, reassembled, tested and returned to service and is operating satisfactory.
- g. Recommendation: Page 38, Paragraph 52-C(2), TM 5-2805-204-14 contains a "caution": "Every 250 hours remove starter drive gear housing and tighten the two screws that hold the end plate on the starter." Recommend this "caution" be placed in the end item manual under Quarterly Maintenance and include cleaning the starter motor internally.

DEFICIENCIES AND SHORTCOMINGS ARE SUBJECT TO RECLASSIFICATION

29. DEFECTIVE MATERIAL SENT TO:	
30. MANE, TITLE BYEL EXT OF PREMIRER	DI. POR THE COMMANDER:
JOSEPH T. HARVEY	C.h. Hellelle
Equip Spec (Gen)	ROBERT A. MULK, MAJ, ORD, C, MED, SSD
MED SSD: Det 1006/4/97	· · · · · · · · · · · · · · · · · · ·

STE Form lots, is decid new aces anste form to 1.

'IV-14

-ATTEON RESULATION YOU-S

	EQUIPMENT PER	FORMANCE	REPORT					
I FROM Commanding Off	icer.	2. OFF	CE SYMBOL: STEC					
	ral Equipment Test Acti			31, 1968				
Fort Lee, Virg		4. EPR NO. L7-10						
5.70 Commanding Gene		& USATECOM PROJ I	10. 7–8-	-0961-01				
	lity Equipment Command	ROT & E PROJ MO.						
ATIN: AMBME-QI		CONTRACT NO. DAAKO1-67-C-A010						
4300 Goodfello		7. TEST TITLE		uction Test of				
St. Louis, Miss			Centrifugal	, 600-GPM				
	LMAJOR							
B. DOOL 35-M-SPS3	OllG-T	9. SERIAL NO.	N/A					
DA QUARTITY 3		IL LIFE PERIOD						
QUIR. E. Ç. Sch	leyer Pump Co. Inc.	51.USA NO.	N/A					
		RY DAYA						
M. HOMENCLATURE / DESCRIPTION	Operation, Maintenance	& Overhaul Mar	nual, with Pa	rts List				
IS. FEN		M. HFR. MAT NO						
IT. DRAWING NO.		W. WFR.						
IS BUANTITY		SOL HEXT ASSEMBLY						
21.978. GOVT. 68P.		22 MAT TEST LIFE	22 PART TEST LIFE					
	Of ING	DENT DATA						
13.00SERYES DURING	24. TEST ENVIRONMENT	25 INCIDENT CLASS		ACTION TAKEN				
A. OPERATION		a. DEFICIENCY		a REPLACED				
A. MAINTENANCE	Maintenance	L SHORT COMM		A BEPAIRED				
X a. Manual Review	Evaluation	XX & SUE, IMPROVE	MENT	L ADJUSTED				
		4. OTHER		d. Di Scott MACTES				
				e acuoves				
27. BATE AND HOUR OF INCIDENT				1. Rest See block 28				
	IX. INCIDEN	DESCRIPTION) N					

28. DESCRIBE INCIDENT FULLY

- a. Attached are recommended changes and additions to Operation, Maintenance and Overhaul Manual with Parts List for Schleyer 600-GPM Centrifugla Pump, Model No. 36M-SPS3011G-T.
- b. During conduct of the test, the manual was continuously evaluated to determine its applicability and adequacy for the test item. The suggested recommendations should improve the operation and maintenance of the test item.

DEFICIENCIES AND SHORTCOMINGS ARE SUBJECT TO RECLASSIFICATION

PA. BEFECTIVE MATERIAL SENT TO:	
JOSEPH T. HARVEY, Equip Spec (GEN) ext 1006/4487	ROBERT A. NULK, MAJ, ORD, C, MED, SSD

STE FORM 1025, IS DEC ST MERCACES ARRIVE FORM 1025

IV-15

MAYECOM RESULATION YOU-

RECORD OF COMMENTS ON PUBLICATIONS

17 Dec 68

1 S. GOVERNMENT PRINTING OFFICE . 1955 O - 462068

3011G-T, Centrifugal Pump, Gasoline Eng Driven, USATECOM Project No. 7-8-0961-01

ITEM NR	PAGE	PARAGRAPH	LINE.	COMMENT (Exact wording of recommended change must be given)
1	iii	During Operations		Add: "CAUTION: Do not tow trailer over 30 mph on surface roads." Explanation: Page 1, Par. 1-2-0, indicates the above caution. DUPING OPERATIONS appears to be the logical place for this caution. Information furnished to the test officer reveals that the test item is not designed for towing at convoy speeds (1. Test item has no safety chain; 2. Test item is wheel mounted only for ease of movement in work area).
2	iii	After Operations (2nd Par.)		Delete the whole paragraph. Explanation: This paragraph is a duplication of paragraph 4 on the same page and can be deleted.
3	111	After Operations (3rd Par.)		Delete the whole paragraph. Add whole paragraph in appropriate section of manual, Pars. 3-15b and 3-15d. Explanation: Tank repairs requiring welding or soldering would require removal. Instructions shown should be in the removal paragraphs.
4	1	1-1	4	Delete: "operation"; add: "maintenance instructions." Explanation: Chapter 2, Section III, NOTE, in TM 5-2805- 204-14 states that operating instructions are not provided in this manual. However, maintenance instructions for the engine are provided.
5	1	1-2.A	7	Delete: "instrument"; add: "control." Explanation: Control is used for identity nomenclature in parts list and figures designated throughout manual.
6	1	1-2.A	7	Delete: "(Fig 1-2)"; add: "(Fig 2-2)." Explanation: Figure 1-2 does not show the controls. Figure 2-2 show the controls.
7	1	1-2.D	3	Delete: "stand"; add: "support leg." Explanation: Support leg is used for proper nomenclature in parts list.
8	4	1-3.C	5	Add after "head": "and equals total of lift and discharge head measured in feet." Explanation: This explanation may help avoid field problems when specified 600-GPM cannot be accomplished because Total Dynamic Head (TDH) is not fully understood. The 350-GPM Pump appears to be the same as the 600-GPM Pump and the TDH is the significant factor.
9	5	1-5.A.2		Recommendation: 1. The performance plate be eliminated on future procurements because:

RECORD OF COMMENTS ON PUBLICATIONS

17 December 1968

3011G-T, Centrifugal Pump, Gasoline Engine Driven, USATECOM Project No. 7-8-0961-01

ITEM NR	PAGE	PARAGHAPH	LINE.	COMMENT (Exact wording of recommended change must be given)
9	5 (Cont	1=5.A.2 inued)		 a. It was not used during testing. b. The operator did not know its purpose. c. The technical manual contains no instructions for its use. 2. If the above recommendation is not acceptable: a. Add to the manual instructions for use of the
				performance plate. b. Place caution in the manual to prevent painting over the performance plate. c. Add an illustration in the manual of the performance plate to be used when the actual performance plate is no longer serviceable (i.e., TM 5-4320-242-15, Page 2-11, MEC 5-4320-242-15/2-4. Explanation: Self explanatory.
10	7	2.7.A	1	Add after "SUCTION LINE": "CAUTION: Attach a suitable strainer before operating pump." Explanation: A strainer is not provided as a basic issue item and must be obtained on site. A caution is recommended to prevent operation, and subsequent damage, without a strainer.
11	8	2.9	1	Delete line l. Explanation: The controls on the engine are not described in TM 5-2805-204-14.
12	8	2.9	3	Add after "control panel": "(Fig 2.2)." Explanation: The controls referenced are shown in Fig 2.2
13	8	2.9	15	Add after "position": "and the oil pressure switch depressed." Explanation: The oil pressure switch must be depressed to complete the magneto ignition circuit when oil pressure is below 20 psi as indicated further in this paragraph. Specified instructions are required to avoid starting difficulties with inexperienced operators.
14	8	Fig 2-2		Delete: "Override low oil pressure cut-off switch." Add: "Start engine." Explanation: Simpler language is applicable for the intended level of reading. The last sentence in Par. 2.9 explains the function of the low oil pressure switch; however, previous experience has revealed operators do not fully comprehend this explanation.
15	8	2-10.1	3	Delete: "Fig 3-2". Add: "Fig 3-1." Explanation: Fig 3-2 refers to electrical wiring diagram. Fig 3-1 refers to preventive maintenance.

1. S. GOVERNMENT PRINTING OFFICE 1938 O. 482088

For use of this form, see AR 310-3; the proponent agency is Office of the Assistant Chief of Staff for Force Development. RECORD OF COMMENTS ON PUBLICATIONS 17 Dec 68 SUBJECT Operation, Maintenance & Overhaul Manual W/parts list, Schleyer Model No. 36M-SPS 3011G-T, Centrifugal Pump, Gasoline Driven, USATECOM Project No. 7-8-0961-01 PAGE SARAGRADH LINE COMMENT (Exact wording of recommended change must be given.) Add after "(TM 5-2805-205-14)": "Figure 5." 16 2-10.4 Explanation: To help operator find the proper figure and instructions for the oil baffel control. Fig 3, TM 5-2805-204-14 shows a clearer view of the oil baffel control. However, there are no instructions for the oil baffel control on Fig 3. Consideration should be given for inclusion of the instructions and illustration in the "end item" operators manual because this is an operational function. 17 8 2-10.6 Change as follows: "Depress oil pressure switch and start switch." Explanation: Oil pressure switch must be depressed for all initial startings, or when less than 25 psi oil pressure is in the system (Ref Par. 2.9). Add after "stopping": "CAUTION: Reduce engine speed to 18 9 2-12 700 or 800 rpm with the governor control to prevent back firing." Explanation: Back firing occurs when run-stop switch is activated to the stop position at high speed. 19 Q 2-14.D Add after "warm up": "by manually adjusting governor control to approximately 1500 rpm." Explanation: Engine governor control is pre-set at 3200 rpm (Par. 2-10.6, note) and will attain this speed immediately unless it is controlled manually by the operator. 20 10 2-18.4 Change paragraph as follows: "Hold choke control in the OUT position while pulling rope to start engine." Explanation: Manual choking is required when the battery is weak or dead (Kef. Par. 2-10.6, note). 21 12 3-6 Delete NOTE. Explanation: The note may be deleted because the instruction is shown in line 1 of Par. 3.6 (items 1 through 15) and again on page 13, item 9. 22 Delete: "INSULATED." Add: "STARTER SOLENOID." 17 Fig 3-7 Item Explanation: Both cables are insulated so this would not properly identify the item. Item 7 is identified as the ground cable. Adding starter solenoid to item 9 will standardize the nomenclature for identification purposes and should be added in parts list.

19

3-16

23

Delete: "3-9." Add: "5-1."

5-1 illustrates trailer parts.

Explanation: Fig 3-9 illustrates the fuel system. Fig

RECORD OF COMMENTS ON PUBLICATIONS For use of this form, see AR 310-3 the proper gency is Office of the Assistant Chief of States	
Subject Operation, Maintenance & Overhaul Manual w/parts list, Sch SPS3011G-T, Centrifugal Pump, Gasoline Driven, USATECOM Project	leyer Model No. 36M- No. 7-8-0961-01
REVISION NOTES FROM	

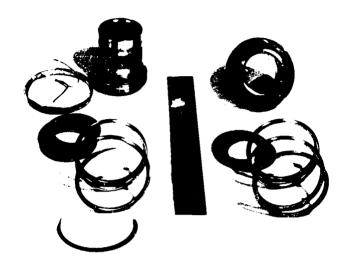
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17EM	PAGE	PARAGRAPH	uine •	COMMEN™ (Exact vording of recommended change must be given.)
24	20	3-16.Ca	1	Add after "refer to". "paragraph 3.18 and". Explanation: Paragraph 3.18 directs that pump and engine will be removed as a unit.
25	22	3=18.B.3		Delete: "to the pump and engine assembly." Add: "in the threaded hote on top of the intermediate housing and the engine block." Explanation: An eye bold threaded into these holes was used satisfactorily during service testing.
26	23	4-2.B	1	Delete: "(41)". Add: "(44)". Explanation: While (41) is incorrect, (44) is correct (see Fig 4-1, Page 26 and Par. 4.4e3, Page 25, and parts list 4-1-44, Page 29).
27	23	4-3.B.1	1	Delete: "retaining." Add: "snap". Explanation: Standardizing nomenclature with parts list nomenclature, Page 29, Index 4-1-37.
28	25	Fig 4-1		Add: "item 21." Explanation: Items 22 and 23, combined, are item 21. The parts list shows item 21 but does not show items 22 and 23.
29	30	Index No. 3-7-7		Add after battery: "ground." Explanation: To simplify ordering of parts and reduce error.
30	30	Index No. 3-7-9		Add after battery: "starter solenoid." Explanation: Same as item 29, above.
31	31	Index No. 3-12-1		Delete: "Washer lock 3/8-in, MS 35338-46." Add: "Screw cap, 3/8-in x 16-1, MS 90725-10." Explanation: To make the parts list correspond with Figure 3-12, No. 1.
32	31	Index No. 3-12-2		Delete: "Screw cap, 3/8-16-1, MS 90725-16." Add: "Washer, lock, 3/8-in, MS 35338-46." Explanation: To make the parts list correspond with Figure 3-12, No. 2.

		APPENDIX	(IV		
		EQUIPMENT PER	FORMANCI	E REPOR	T
I FROM	Commanding Of	ficer	2.0	FFICE SYMBOL:	STEGE-TE-S
,		eral Equipment Test Act	ivity 3.0	ATE: 10 Jan	nuary 1969
<u> </u>	Fort Lee, Vir		4. E	PR NO.	L7-11 ć
5 TO	Commanding Ger		6. USATECOM PRO	J NO.	7-8-0961-01
		ility Equipment Command	ROT & E PROJ	NO.	
	ATTN: AMSME-		CONTRACT NO.		
}	4300 Goodfell	-	7. TEST TITLE	Initial Pro	oduction Test of
	St. Louis, Mi	ssouri 63120	Pump, Cen	trifugal. 60	OO GPM
			ITEM DATA		
8. MODEL	36M-SPS	3011G-T	9. SERIAL NO.	11-2283	
10.QUANTIT	Y . 2		II. LIFE PERIOD	512 hours	
12.MFR.	E. C. S	chlever Pump Co., Inc.	13.USA NO.	N/A	
		II. PA	RT DATA		
14. HOMENC	LATURE / DESCRIPTION	Pump Seal			
15. FSN	None		IS. MFR. PART NO.	A-0004-M36	
17. DRAWING	NO. None		ig. MFR.	71724	
IS. QUANTIT	rv <u>1</u>		20. NEXT ASSEMB	LY Intermed	liate Kousing
21.8TD. 601	YT. SRP. 5501		22. PART TEST LI	FE 512 hour	rs -
		III. INC	DENT DATA		
23.085ERV	ED DURING	24. TEST ENVIRONMENT	25. INCIDENT CLA	3 \$	26. ACTION TAKEN
X e. OPER	ATION	Normal pumping	X O. DEFICIENCY		x a REPLACED
b. MAIN	TENANCE	operations - fresh	b. SHORTCOMI	NG	b. REPAIRED
6.		water	c. SUG. IMPRO	VEMENT	e. ADJUSTED
		1	4. OTHER		4. DISCOMMECTED
_					e. REMOVED
27. DATE A	ND HOUR OF INCIDENT				I. NONE
		LY. INCIDENT	DESCRIPT	ION	
to th b compl with c cause accep	e extent that a constant of the incident damage to the table level.	hours, water began sprache test item had to be of the pump revealed the and the spring broken, when the photographs). It is classified as a department of the efficient is attributed at the salt water (surf) open	stopped. ne seal (Schl and the intention of the ciency of the to prematur	eyer part No rmediate hou use continue pump was lo	o. A004-M36) to be using half filled ed operation would owered below an
	DEI	TICIENCIES AND SHORTCOM	NGS AND SUBJ	ECT TO RECLA	ASSIFICATION
29. DEFECT	IVE MATERIAL SEAY	X RETAINED AND PHOTOC	APHS ATTACHE	D.	
	TITLE & TEL EXT OF		31. FOR THE COL		11
			10000	SS N	"Inan
THOMA	max M. 140 S M. HORGAN, 11	T, TČ	DENNIS B.	SULLIVAN, MA	CT, QMC
		L Equip Test Br			ent Test Branch
	585/1697	- •			Testing Directorate
	-		1	•	-

STE Form 1025, 18 DEC 67 REPLACES AMSTE FORM

IV-20

USATECOM REGULATION 705-4





	Ε	QUIPMENT PERF	ORMAI	NCE F	REPORT			
I. FROM	Commanding Offi	lcer		2. OFFICE		STEGE-TE-S		
	U.S. Army Gener	ral Equipment Test Acti	vity	3. DATE:	15 Janu	ary 1969		
	Fort Lee, Virgi	inia 23801		4. EPR NO	0	L7-12		
8. TO	Commanding Gene	eral	S. USATECON	PROJ NO.	1	7-8-0961-01	,	
	U.S. Army Mobil	lity Equipment Command	ROTAEP	ROJ NO.				
	ATTN: AMXME-QF	RT	CONTRACT NO.					
	4300 Goodfellov	v Boulevard	7. TEST TIT			oduction Test of		
	St. Louis, Miss	souri 63120	1		Pump, Cent	rifugal. 600 GPM		
		I. MAJOR						
8. MODEL	36M-SPS30)11G-T	9. SERIAL N		H-2282			
ITHAUD.OF	TY 2		II. LIFE PER	100	110 servic	e test hours		
ilufa.	E.C. Schl	eyer Pump Co., Inc.	13.USA NO.		N/A			
		II. PAI	T DATA					
14. NONEH	CLATURE / DESCRIPTION_	Volute Casing						
16. FSN	None		IG. MFR. PAR	Ť NO	Schleyer A	-001-M36		
17. DRAWIN	16 NO. None		IS. MFR.		Schleyer			
IS. GUANTI			20. HEXT AS	BEMBLY	Intermedia	te housing		
21.87D. 60			22. PART TES	IT LIFE	110 hours			
		D. INGIL						
23.000ER	VED DURING	24. TEST ENVIRONMENT	28. INCIDENT		186	ACTION FAIREN		
	RATION		O. DEFICE	ENCY		a replaced		
	NTENANCE	Below freezing	b. SHORT	COMING		A REPAIRED		
	fore-operation	temperatures		MPROVEMEN		a. ABJUSTED		
	spection	1	× 4. OTHER			d. DISCONNECTED		
	a ,	1				e. REMOYED		
ET. DATE	IND HOUR OF INCIDENT	13 January 1969, 0600	bours			I. HOME		
		DY INCIDENT		PTION				

G. DECORIDE INCIDENT FULLY

- a. Water left in the pump froze and cracked the volume casing #A-001-M36 approximately 3 inches on the outer surface.
 - b. During disassembly of the pump casing, the thesk value was found to be damaged.
- c. The volute casing is being repaired by Heli-And Welding and will be hydrostatically tested.
- d. Test operations will be resumed using the volume casing of test item H 1322 as a replacement.

DEFICIENCIES AND SHORICOMINGS ARE SUBJECT TO RECLASSIFICATION

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ı	-		11		D. J.	-			70 X		7

THOMAS M. HORGAN, 1LT, TC Test Officer, MHE/POL Equip Test Br Ext 1585/1697

BYE TATE IDEE, IN DEC ST HEMLACES AMETE FORM IDE.

31. FON THE COMMANDER

DENVIS E. S. LIVAN, MAI, QMC

Object. MAE/FOL Equipment Test Branch

| Service Test Division, Testing Directorate

LV-22

USAYECOM RESULATION YOS-4

	E	QUIPMENT PERF	ORMAI	NCE F	REPORT	•	
I. FROM	Commanding Off U.S. Army Gene Fort Lee, Virg	eral Equipment Test Act	ivity	2. OFFICE 3. DATE; 4. EPR NO	15 Jan	STEGE- luary 1969 L7-13	
5. TO	Commanding Ger U.S. Army Mobi ATTN: AMSME-C	neral ility Equipment Command PRT	CONTRACT	E PROJ NO. Proj no. I no.		7-8-09	
	4300 Goodfello St. Louis, Mis	ssouri 63120	7. TEST TIT			roduction trifugal.	
			IYEM D/				
e noocl	36M-SPS30)11G-T	9. SERIAL M		H-2283		
O.QUANTITY	2		II. LIFE PEI	105	512 hours		
12.upa.	Schlever	Pump Co. Inc.	13 USA NO.	-	None		
,			LIDATA				
	TURE / DESCRIPTION	Priming Plug		*******			
M. 784	None		16. NFR. PART NO. A-909-M36				
17. DRAWING I			10. M/R.		Schleyer		
18. QUANTITY			BO. NEXT AS				
21.870. BOVT.	GRP. 5500		22. PART TE		512 hours		
T POST NA		84. TEST ENVIRONMENT	SS INCIDENT			ACTION TANKS	
a. OPERA		Pump had just been	O. LL FIG		×	a ACPLAGED	
A. MAINT		removed from Maint	X D. SHOR			A ACPAINCE	
	ial inspection	Shop after quarterly maintenance had been	s. SUS. IMPROVEMENT			A A AMOTEO	
prior to	A. OTHER		ļ	6. 9194641 NG			
44 6400 444	Walla of Inciarys	accomplished.)() have	STREET, STREET, STREET, STREET,		a. MEMOVED	
TI DAY S AND	HOUR OF INCIDENT	13 January 1969, 08		NOTAL:		I. HONE	
		IV. NCIDENT	UEDUN	FILL			

- a. Prior to operation, the priming plug A-909-M?6 was broken during removal to prime the pump. The entire wrench area of the plug twisted off, leaving an opening into the pump housing. The remaining portions (thread section) were removed by hacksawing and a screw extractor.
- b. The incident is classified as a shortcoming because the pump could not be primed until the item was repaired.
- c. Cause of the incident is attributed to using a ferrous metal plug in a nonferrous metal volute casing, resulting in seisure (unequal expansion and contraction of dissimilar metals and corrosion by electrolysis) of the plug to the volute casing, making removal difficult.

DEFICIENCIES AND SHORTCOMINGS ARE SUBJECT TO RECLASSIFICATION

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THOMAS M. HORGAN, 1LT, TC Test Officer, MHE/POL Equip Test Br Ext 1585/1697

DENNIS B. SULLIVAN, MAJ, QMC

to the fire country of

Chief, MME/POL Equipment Test Branch
Service Test Division, Testing Directorate

THE TEN STOR BESTELLIST TRADE

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IV-23

	EG	UIPMENT	PERF	ORMANCE			
I. FROM	Commanding Offic				E SYMPOL: S'	TEGE-SS-E	
	U.S. Army Genera	 11 Equipment T	'est Activ		: 16 Janu	uarv 1969	
	Fort Lee. VA 23			4. EPR	10). L	7-14	
5.70	Commanding Gener			& USATECOM PROJ IN		0961-01	
	U.S. Army Mobili			ROT & E PROJ NO.			
	ATTN: AMSME-QRI			CONTRACT NO.			
ł	4300 Goodfellow			7. TEST TITLE IT	nitial Pro	duction Test	ot
	St. Louis, Misso					600 GPM, Wate	
	THE STATE OF THE S	T. T	TAJOF	TATA DATA	الباشارية المجارية ال		
& HOOGL	36M-SPS30		_الكابعب	3. SEMAL 80.	H 2283		
A SHAUTIT	7 7 2			IL LIPE PERIOD	N/A		
Q.879.	F.C. Sch	lever Pump Co.		23.USA 110.	N/A		
			THE PAR	Y DAYA			
id, minimum	CLATURE / SESEMPTION_	operation. Mai	ntenance	& Overhou Mar	qual with	Parts List.	
A. (188		N/A		16. MFR. PART NO.	N/A		
D. COLUMN	1 114.	N/A			eyer Pump	Co. Inc.	
D. CHARTI	المناسب فالمنافية فيسمون	1		SA HEXT ASSEMBLY			
21,579. 00		N/A		SE MAT TEST LIFE			
			W. HEGIO	ERT DATA			
ON MINES	d) while	A TUT OR MAN		BE HICHERT CLASS		THE RESERVE	
	047104			XX a deficiency			
	ritanies	Maintenance		A SHOOT CHANCE		A Market	
	mulated Maint	t	-	s. SHE. HAPRONEM			
		1	ì	4 OTHER		A MARKETON	9
l		1				O. E. C.	
T. DATE	IND HOUR OF INSIDENT	15 January	1969	1330		XX See	block 28
أبط فيتداد فينظ			CIDENT	DESCRIPTIO	N		

A DESCRIPE MICHBERT PULLY

- a. Attached is a shop sketch of the actual wiring as found on the above test item. This wiring does not correspond to the schematic diagram, Fig 3-2, Page 16, of the maintenance manual furnished with the test item.
- b. Incident is classified as a deficiency until corrective action is approved and the remainder of items under contract are verified for correct wiring. Accurate maintenance instructions must be provided that refrect correct wiring of test item prior to issue.

S. MATTERING BATERIAL RESULT TO:	
STREET, WALL EVEC SEV OF PRINCIPLE	Makka Hulk
JOSEPH T. HARVEY, Equip Spec (Gen), MED	ROBERT A. NULK, MAJ, ORD, C, MED, SSD

JOSEPH T. HARVEY, Equip Spec (Gen), MEI ext 1006

IV-24

ELIVE ELEPTICATION

APPENDIX IV REPERENCE DESIGNATIONS M-1 PRESSURE THORATCE M-2 TACHOMETER P-1 PLUC 8505-1936 P.2 PLU 8504 M36 BROWN + WHITE S.I START SWITCH. 5.2 OIL POESSURY-SWITCH 5.3 RUL STOP SWITCH J-1 AMPHELOL CONJECTOR RED + WHITE YELLOW M-1 BLUE ۵ ORANGE BLACK GREY 41 S-1 WHITE S-5 S-2 BROWN GREEN

BACK - WHITE

EPR L7-14, USATECOM Project No. 7-8-0961-01 IV-25

	ALLENDIX IA
EQUIPMENT	PERFORMANCE REPORT
1. FROM Commanding Officer	2. OFFICE SYMBOL: STEUE-SS-E
U.S. Army General Equipment Te	
Fort Lee, Virginia 23801	4. EPR NO. 1.7-15
1.70 Commanding General	6. USATECOM PROJ NO. 7-8-0961-01
U.S. Army Mobility Equipment C	Command RDT & E PROJ NO.
ATTN: ANSME-QRT	CONTRACT NO.
4300 Goodfellow Boulevard	7. TEST TITLE Initial Production Test of
St. Louis, Missouri 63120	Pump, Centrifugal, 600 GPM, Water
·	MAJOR YEN DATA
36M-SPS3011G-T	9. 9EMAL NO. H-2283
A.QUANTITY 3 A.DFR. E.C. Schlever Pump Co. Inc.	LLIPE PERIOD 600 hrs
E.C. Schlever Pump Co. Inc.	
	tenance & Overnou) Manual with Parts List
N/A	OL MANY MC. N/A
7. SALVING III. N/A	0. U/A
IA COMMITTY N/A	20. MENT ASSEMBLY N/A 22. PART TEST LIFE N/A
81.879. 66VT. 66P. N/A	CARCIDENT DAYA
23. 000CAVET BURNING S4. TEST ENVIRONMEN	
4. 0023 FOR	a DEFICIENCY a REPLACED
A MAINTENANCE Maintenance	
Xa. Manual Review Evaluation	
Alt Imidal Review	4. OTHER 4. DISCON HESTED
	le. Studyta
ET. DATE AND HOUR OF INCIDENT N/A	X 1. NOOE See 1 cem 28
	नाग राष्ट्र विश्वविद्यालय
DE DESCRIBE INCIDENT FULLY	

- a. Attached are recommended additions to the Operation Maintenance & Operhaul Manual with Parts List for Schleyer 600 GPM Centrifugal Pump, Not the consequence G-T.
- b. Premature failure of the pump seal (Part No. A004-M35). FPR . attributed to insufficient maintenance instructions.
- c. Adherence to recommended additions to the daily main status of the will prolong the lafe of the seal, and permit replacement peror to only a failure of the seal and additional damage to the internations how to see that e.
 - d. Reference EPR L7-10.

DEFICIENCIES AND SHORTCOMINGS ARE SUBJECT TO RECLASSIFICATION

CN.
R. Mol. Okt. Chief. MED. SSD
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STE FORM 1005, 18 DEC ST. MENIAGES AMSTE FORM 1021

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LEYE HEAVEON PENCATION TOE-4

	APPENDIX IV				
	RECORD OF COMMENTS ON PUBLICATIONS For use of this form, see AR 310-3; the proponent OATE				
36M-	Ope	ration, Main lG-T. Centri	tenanc fugal	e & Overhaul Manual with Parts List, Schleyer Model No. Pump, Gas Eng Driven, USATECOM Project No. 7-8-0961-01	
REVISIO	N NO?ES	FROM	3.4		
ITEM NO.	PAGE	PARAGRAPH	LINE *	COMMENT (Exact wording of recommended change must be given.)	
1	7	2-7-A	9	Add after "debris": "and abrasive liquids." Explanation: Disassembly of the test item revealed extensive wear to the internal components indicating a need for additional caution and filterization during surf operations.	
2	7	2-7-A	9	Add after "pump": "(Provide a settling bed during surf operations to minimize entrance of sand into the pump)". Explanation: Same as item 1, above.	
3	13	Fig 3-1	9	Add: "Item 9. Remove drain plug (Item 33, Fig 4-1) from the intermediate housing and flush entire pump with fresh water. A daily increase in the amount of drainage from the intermediate housing indicates a defective seal (A004-M36) and the seal must be replaced." Explanation: During service testing, sand accumulated in the intermediate housing (EPR L7-11) and caused premature failure of the pump seal, and the intermediate housing assembly. Daily draining and early recognition and replacement of a defective seal will prevent mission stoppage and additional damage.	
			·		
* Bolon	ence to line	e number within the	Para Ter.	ur is disparage anni	